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ELAN.042PA
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VIA! TOOLS

VIA! Product Family SetUp Software

Reference Manual
Version 3.0
November, 2002

ELAN™
HOME SYSTEMS

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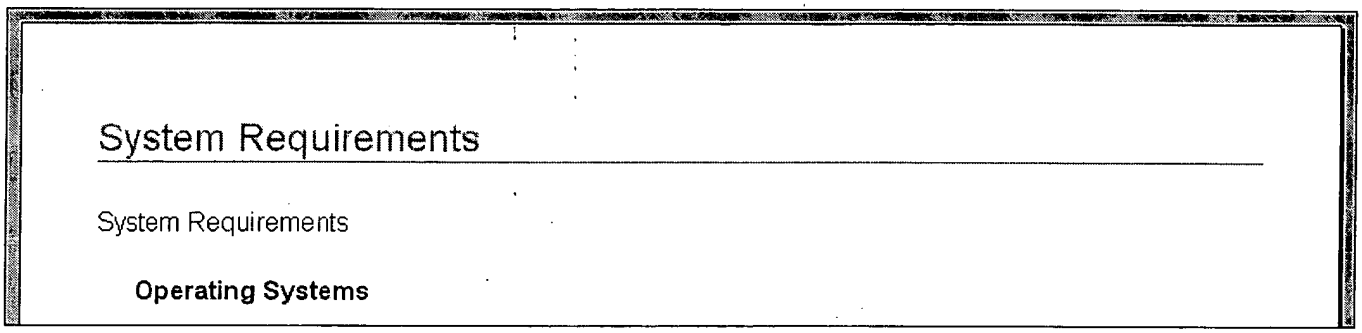
Using This Manual

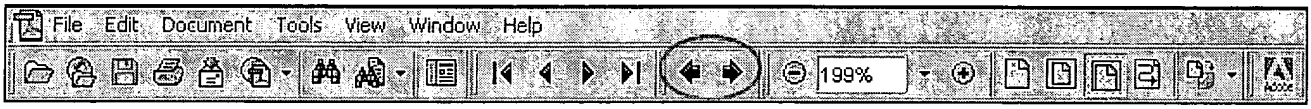
Using This Manual

This manual is divided into several sections. The sections can be identified by looking at the Head of each page. The following illustration shows the System Requirements section:

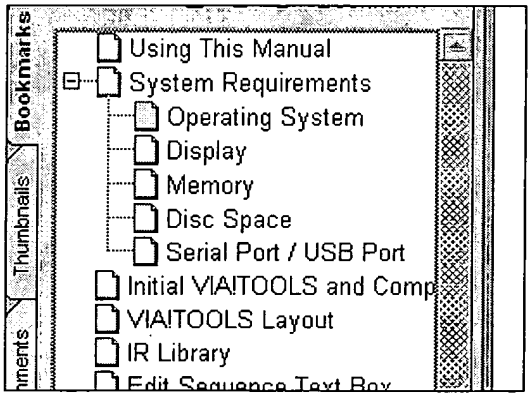


There are several features this manual to allow the reader to quickly navigate to a section of interest.

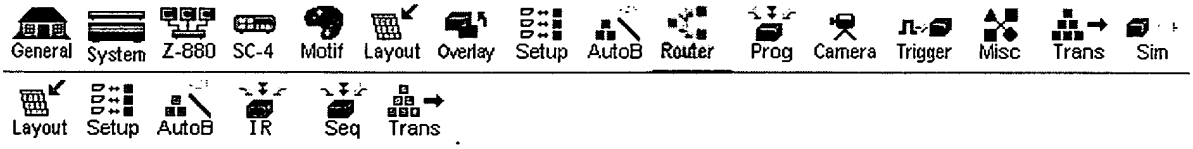
1. **Bold Blue** text identifies it is a hyperlink to another area in the manual. Clicking the text will navigate from the current location to another. To navigate forward or back press the back arrows.



2. Bookmarks provide direct access to a specific sections or subsections within the section. Click on the Plus symbol to expand the section to navigate to a particular area of interest within the section.



3. Screen Icons provide direct access to the beginning of a section. They include:



System Requirements

System Requirements

Operating Systems

- Microsoft Windows 98™, Windows ME™, Windows 2000™, and Windows XP™.

Display

- 800 by 600 resolution or higher

Memory

- 16MB RAM minimum

Disc Space

- VIA!TOOLS: 20 MB
- Customer Files: 8 MB plus
- Additional space will be required if serial drivers are installed

Serial Port / USB Port

- You will need either a Serial Port or USB Port available on your computer in order to interface with the VIA! Learner, VIA! or SC4.

NOTE: If your PC possesses a USB port and not a DB-9 serial communication port, a USB-to-DB9 converter will be required. At this time, only the **Belkin** brand converter has been approved for use with VIA!TOOLS.

Initial VIA!TOOLS and Computer SetUp

Initial VIA!TOOOLS and Computer SetUp

This section consists of:

Set the COMM Port

- You will have to specify what communication port VIA!TOOLS will use to transfer data to the Learner, VIA! and SC4.

Verify the communication port installed on your computer.

Right click the **My Computer** icon on your desktop or from the **Start** menu.

Select **Properties** from the pop up menu.

Windows XP™ and 2000™

Select the Hardware tab.

Select **Device Manager**.

Windows 98™ and ME™

Select the Device Manager tab.

Search for Ports (Comm & LPT) from the text field and click the tree expand symbol.

Look for the communication port number that has been assigned.

Set the communication port in VIA!TOOLS.

From the **Tools** menu in VIA!TOOLS, select **Set COMM Port**.

Check the established **communication port number** checkbox and click **OK**.

If the communication port is **COMM 1**, select **COMM 2** and re-select **COMM 1**.

If the **communication port number** checkbox is not displayed on the dialog, type **"COM"** and the **number** of the port in the **Other** text field.

Set the Font Size

- You will have to set the font size of the authoring computer to **Small Fonts** to display VIA!TOOLS control text fields and buttons correctly.

  Right click the **Desktop**.

  Select **Properties** from the pop up menu.

  Select the **Setting** tab from the **Display Properties** dialog window.

  Select **Advance**.

  Windows 98™ and ME™:

  Select Normal Size (96 DPI) from the DPI Settings drop down box.

  Windows XP™ and 2000™:

  Select Small Fonts from the Font Size drop down box.

NOTE: You may have to restart your computer for changes to take affect. Close all programs prior to restarting.

Set Screen Font Effects (Windows XP™ only)

- You will have to set Window's font Effects to Standard to properly display text on VIA! buttons after downloading to the VIA!.

  Right click the **desktop**.

  Select **Properties** from the pop up menu.

  Select the **Appearance** tab.

  Select **Effects**.

  Ensure the checkbox **"Use the following method to smooth edges of screen fonts:"** is checked and **Standard** is set in the drop down box.

  Click **OK**.

Closing other programs while using VIA!TOOLS

- Some computers, usually older ones, may not provide VIA!TOOLS enough memory resources to operate correctly. Because of this, it is recommended you close all programs, except **EXPLORER** and **SYS TRAY**, while running VIA!TOOLS.

Simultaneously press **CTRL-ALT-DEL** on your keyboard to bring up the Close Program dialog box.

Windows 98™ and ME™:

Select a **program** from the list.

Select **End Task**.

Perform these steps until all programs, except **EXPLORER** and **SYS TRAY**, are closed.

Windows XP™ and 2000™:

Click **Task**.

Select the **Applications** tab.

Select **End Task** for each Application.

Once all Applications have been ended, select the **Processes** tab.

Select **End Process** for each Process.

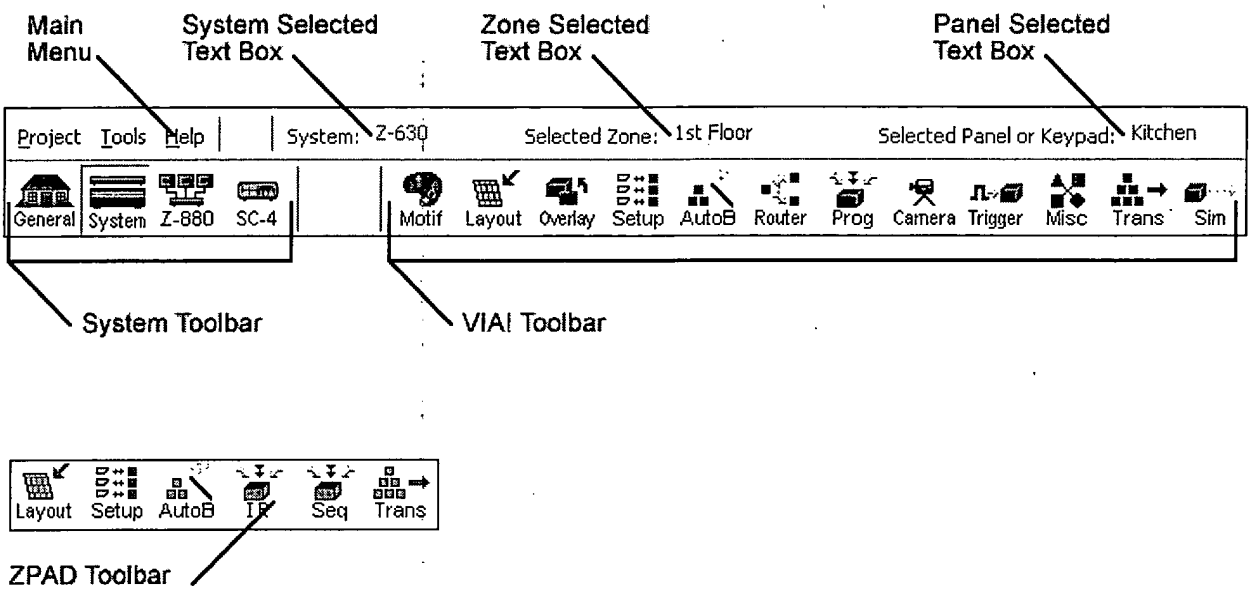
Run VIA!TOOLS.

- Some programs, Palm Pilot PDA and HotSynch Manager, may interfere with the download process. To prevent this, disable the programs.

  Right-click the **HotSync** or **Palm Pilot PDA** icon in the system tray.

  From the popup window, select **Exit**.

VIA!TOOLS Layout



Main Menu

Project

Open:
Opens previously created projects.

Save:
Saves the current project.

Save As:
Saves the current project as a different project name.

New:
Creates a new project.

Close:
Closes the current project.

Import:
Imports a project that has been zipped using the Export feature.

Export:
Zips all associated files of current project into a single zip file.

NOTE: The Import/Export feature allows projects to be transferred from one computer to another. It is also a means to back up projects into one file for long-term storage. All zipped files are located in C:\ELAN Transfer.

CAUTION: DO NOT attempt to copy customer files using Windows Explorer or any other method. Permanent project file corruption could occur.

Email:

Emails the opened project to an address the program chooses from a list.

NOTE: Internet access is needed to email.

Exit:

Closes VIATOOLS.

TOOLS

IR Library:

Allows a programmer to capture and create an IR code for a remote control device.

Import:

Imports IR Files, VIA! Panel Templates, Source Button Templates and Function Page Templates that has been Export using the following Export feature.

Export:

Zips selected IR Files, VIA! Panel Templates, Source Button Templates and Function Page Templates into a single zip file.

NOTE: The Import/Export feature allows IR Files, VIA! Panel Templates, Source Button Templates and Function Page Templates to be transferred from one computer to another. It is also a means to back up these files into one file for long-term storage. All zipped files are located in C:\ELAN Transfer.

Calculate/Display SC-4 Conversion Table:

This feature displays a conversion table, which is used to troubleshoot installations. When displayed, the information details which buttons on the VIA Panel issue SC-4 commands and what they are linked to in the SC-4's memory.

Update Learner Firmware:

Allows a Learner's firmware to be updated.

Update VIA! Firmware:

Allows a VIA!'s firmware to be updated.

Update SC-4 Firmware:

Allows a SC4's firmware to be updated -4.

NOTE: Firmware is the software program that resides in the Learner, VIA! and SC4. Firmware is not lost when power is removed; it is non-volatile memory. When new features are created for VIA! panels, the firmware may be updated to ensure proper functionality.

Clear All Sequences:

Deletes all commands from all buttons on the selected panel.

NOTE: This command is mainly use for troubleshooting. It is recommended that the project is "**Exported**" to save the current configuration prior to executing this command.

Clear all SC-4 Entries:

Deletes all serial commands from all buttons on the selected panel.

NOTE: This command is mainly use for troubleshooting. It is recommended that the project is "**Exported**" to save the current configuration prior to executing this command.

Check Sequence Strings:

This feature checks the programming for every button on the selected Panel in Zone for loose commands. Loose commands are commands that are not assigned to buttons.

Report Total NOP Found:

NOPs are commands that are Not Operable or not assigned to buttons. A list is created containing the non-operable commands by Function Page, Button Number and Button Name in Notepad. Once the NOP is found, replace it with the same IR command to re-establish the command with the button.

VIA!NET Analyzer:

A diagnostic tool that that checks the integrity (open, short or long wire runs) of the V-NET network.

Set COMM Port:

Allows you to select a communication port to enable downloading to the VIA!, Learner and SC4.

HELP

About:

States the revision number and the changes made to the program.

Tutorial Movies:

Animated assistance for programming VIA! Touch Panels.

NOTE: Tutorial movies are obtained from a VIA!TOOLS installation CD or on **ELAN's** download web page **http://www.elanhomesystems.com/dealer/download.htm#Tutorial**

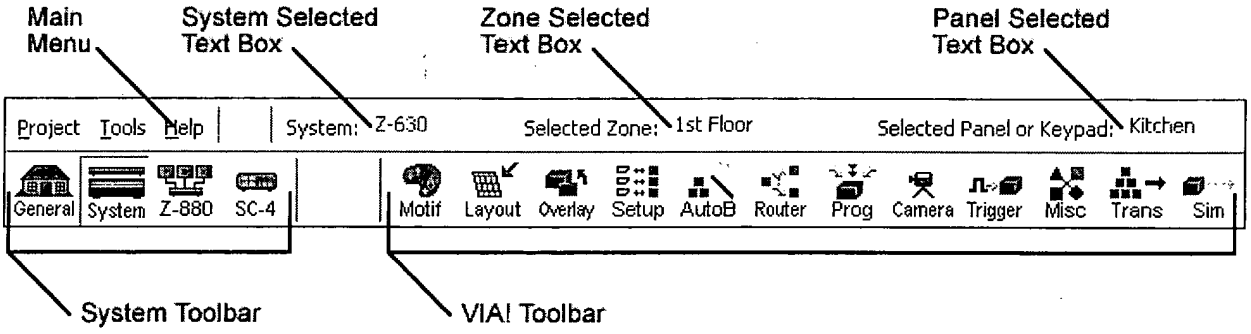
Internet Help

Three hyperlinks provide direct access if an internet connection is established:

Go to ELAN Home Systems Web Site.

Go To Restricted Web Page for Dealers.

Go To Message Board for Dealers.



System Selected Text Box

- Shows the currently selected System Type.

Zone Selected Text Box

- Shows the currently selected zone.

Panel Selected Text Box

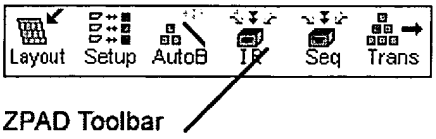
- Shows the currently selected panel.

System Toolbar

- Groups all screens that are used to program system wide components and commands.

VIA! Toolbar

- Groups all screens that are used to program a selected VIA! panel.



ZPAD Toolbar

- Groups all screens that are used to program a selected ZPAD panel.

IR Library

IR Library

The IR Library is a collection of files containing IR commands supplied by ELAN or captured by the installer.

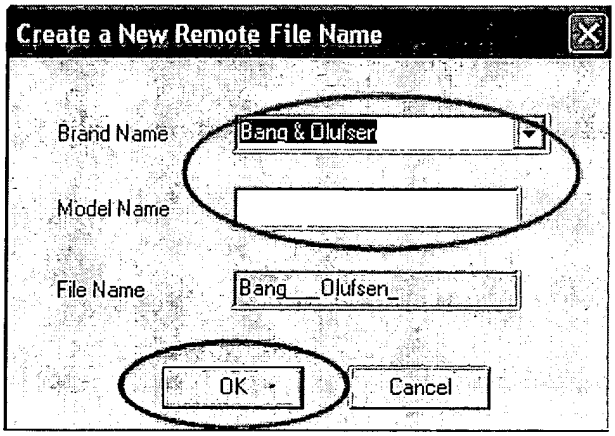
IR commands, stored in the Library, are assigned to VIA! and/or ZPAD buttons to control components.

The **IR Library** can:

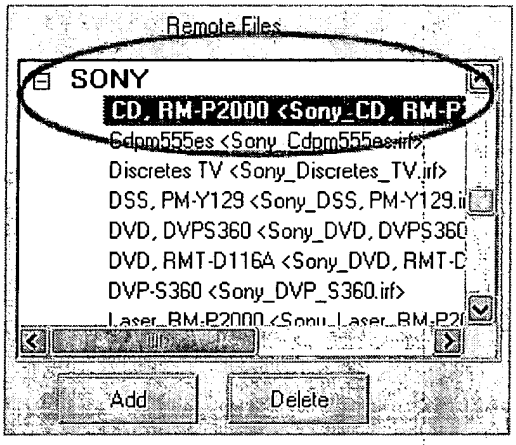
- **Create a remote control IR file** See PG **19**.
- **Add IR command names to an IR file** See PG **20**.
- **Learn IR commands to an IR command name** See PG **21**.
- **Determine if an IR Code has been Learned Correctly** See PG **22**.
- **Testing IR commands** See PG **23**.
- **Remove a remote control IR file** See PG **23**.
- **Remove specific IR command from an IR file** See PG **23**.

To create an IR file:

- From the **Tools** menu, select **IR Library**.
- A dialog box may display: "Learner not found on Comm 1". If this occurs, ensure your Learner is connected to the computer and powered.
- Select **ADD** underneath the **Remote Files** text box.
- Select a **Brand Name** from the drop down menu or type a new **Brand**.



- Type in a **Model Name** in the **Model Name** text box and click **OK**.
- Search for the new **Brand Name** in the **Remote Files** text box and click the ⊞ tree expand symbol.



- The new IR remote control **Model Name** is displayed underneath the **Brand Name**.

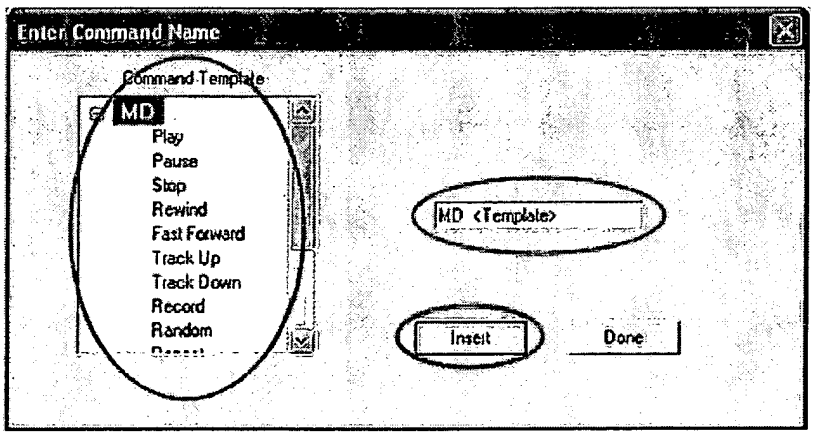
NOTE: The Model Name should be intuitive and descriptive. Include the Brand Name, type of source and the Remote Part Number if possible. Example: SONY_CD_RM_DX220.

Add IR command names to an IR file.

- Select the desired **Brand** and **Model Name**.
- Click **ADD** below the **IR Commands** Text Field.
- You can enter **IR command Templates** or a **Single IR** command.

IR Command Template. This will allow several IR Commands from a list to be added at a time.

- Click the tree expand ⊞ symbol next to a **Source Type** to display **IR Command Names**.

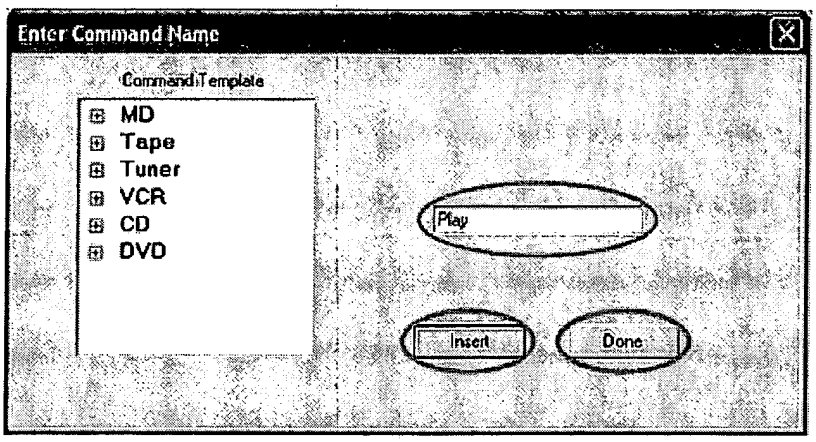


- Double click the **Source Type** that was expanded to place the **Source Type** and **<Template>** tag in the Text Field.
- Click **Insert**.

- **IR Command Names** have been entered in the **IR Commands** Text Field.

Single IR Command. This will allow one IR Command to be manually added.

- Type in an **IR Command Name** in the text field.



- Click **Insert**.
- The **Enter Command Name** dialog window disappears for a moment and reappears to allow another command to be added.
- Perform the above until all desired **IR Command Names** have been added.
- Once all **IR Command Names** have been added, select **Done**.
- The **IR Command Name/s** have been entered in the **IR Commands Text Field**.

Learn IR commands to an IR command name

NOTE: You will need a VIA! Learner to learn IR Commands.

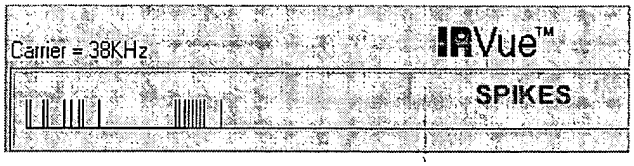
- From the **Project** menu, select **IR Library**.
- Search for the Brand Name in the **Remote Files** Text Field and click the tree expand ⊞ symbol to show the IR files within the **Brand Name**.
- Select the **Model Name**.
- Select the **IR Command** to be captured from the **IR Commands** Text Field.
- Click **Capture IR**. The **STATUS** led on the Learner should illuminate Green and **Capture IR** in VIA!TOOLS changes to **Stop Capture**.
- Hold the Remote Control 1 to 2 inches away from the Learner's IR window.
- Press and hold the Remote Control's button. The **IR Range** led on the Learner will flash Green. Continue pressing until the **STATUS** led extinguishes and **Stop Capture** changes to **Accept IR**.
- Click **Accept IR**, if the IR Code has been learned correctly.

- Click **Decline IR**, if an IR Code has NOT been learned correctly.

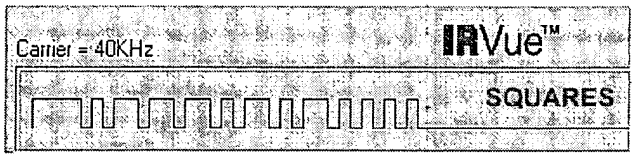
Determine if an IR Code has been Learned Correctly

- The IRVUE™ displays captured IR commands.
- If the IRVUE™ displays square waves for manufacture XYZ and previous learned IR Codes for XYZ are spikes, the code could be captured incorrectly.

Possibly bad.

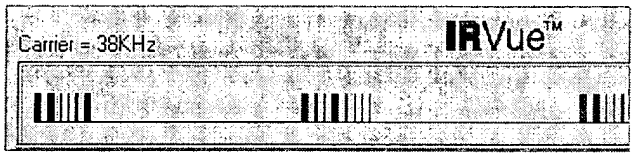


Most likely learned correctly.

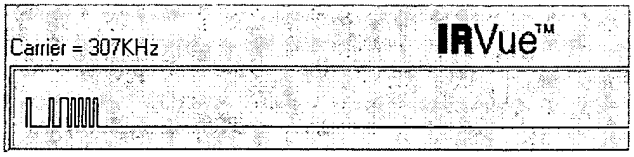


- If the IRVUE™ displays groups of spikes for manufacture XYZ and previous learned IR Codes for XYZ are only one set of spikes, the code could be captured incorrectly.

Most likely learned correctly.



Possibly bad.



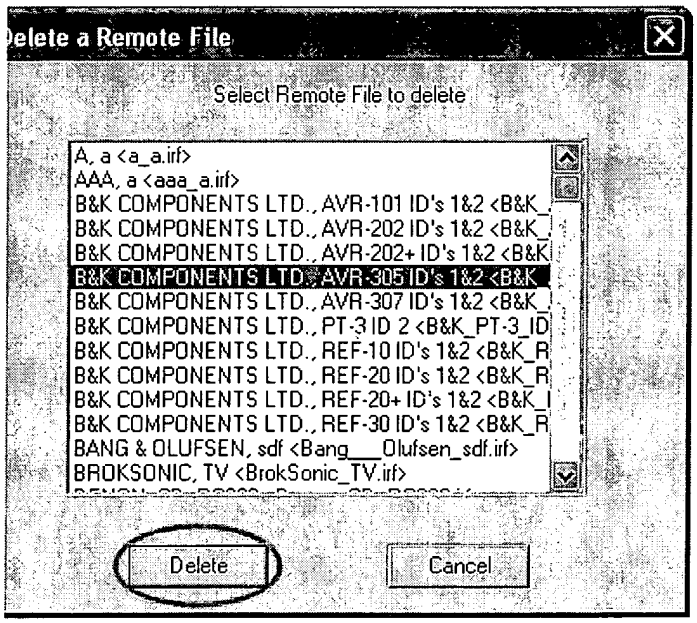
- Look and compare IR codes to previous captured IR codes, of the same manufacturer, to determine if they are captured correctly.
- If every attempt has been taken to ensure the IR codes look similar has failed, test the IR codes. If testing the IR codes control the equipment, the codes are captured correctly.

Testing IR commands

- After capturing a command, you have an option to **Accept IR**, **Decline IR** and **Test IR**.
- Hold the VIA! Learner 3 feet from the source equipment to be controlled and click **Test IR**.
- The selected IR command is transmitted out the Learner's **TEST IR** leds.
- If the IR command controls the equipment, select **Accept IR**.
- If the IR command does not control the equipment, select **Decline IR** and relearn the code.

Remove a remote control IR file

- From the Project menu, select **IR Library**.
- Select **Delete** underneath the **Remote Files** Text Field.
- Select the **Remote File** to be deleted from the text field and click **Delete**.



- Select **YES** at the confirmation dialog window.
- The **Remote File** has been deleted.

Remove a specific IR command from an IR file

- From the **Project** menu, select **IR Library**.
- Search for the **Brand Name** in the **Remote Files** text box and click the tree expand ⊞ symbol to display the IR files for that **Brand**.
- Select the **Model Name** that IR commands will be deleted from.

- Select the **IR Command** that will be deleted from the **IR Commands** Text Field.

- Select **Delete** underneath the **IR Commands** Text Field.
- The **IR Command** has been deleted.

Edit Sequence Text Box

Edit Sequence Text Box

The Edit Sequence text box allows complicated sequences to be built. It can be accessed from the Overlay Screen, Router Screen, Program Screen, Camera Screen and Trigger Screen.

The **Edit Sequence Text Box** allows you to:

- **Add an Edit Sequence command to a button** See PG **26**.
- **Remove an Edit Sequence command from a button** See PG **26**.
- **Changing IR routing after a single IR command has been assigned to a button.** See PG **26**.
- **Change the Delay time** See PG **27**.

The **Edit Sequence Text Box** consist of the following:

- Add an IR command.
- Add a delay.

Some source components cannot respond to IR as rapidly as a VIA! can transmit. In this case, **delays** will need to be added between the IR commands.

- Add a Switch to Video Mode.

This command will switch the VIA! from a **graphical display** with buttons to a **video display**.

- Add a Switch to Video Mode with Overlay.

This command will switch the VIA! from a **graphical display** with buttons to a **video display with specific overlays**. Overlay pages are discussed in the **Overlay Screen** Section.

- Add and Exit from Video Mode.

The Exit from Video Mode allows the VIA! to exit from a **video display** to a **graphical display with buttons**.

- Add a Switch to Camera Mode.

A Switch to Camera Mode notifies the VIA! to navigate to the **Camera Screen** and perform the **Initial Camera Sequence** button.

- Add a SC4 command.
- Add a Wait Until Button Release command.

This command allows a user to press and hold a button and ramp lights until the button is released.

- Add a Repeat Last Step Until Button Release command.

Edit Sequence Text Box

This command allows a user to press and hold a button and ramp volume until the button is released.

- Remove a command.

Add an Edit Sequence command to a button

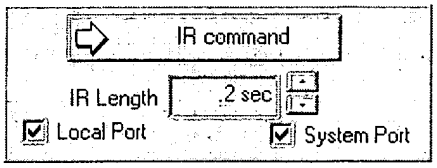
- Select a **button** or **trigger** to assign a **Sequence** command.
- Click **Edit Sequence** below the **Programmed Sequence** text box.
- Click the desired **Edit Sequence** command.
- The **Edit Sequence** command has been added to the **button**.

Remove an Edit Sequence command from a button

- Select a **button** to remove an assigned command.
- Click Edit Sequence below the Programmed Sequence text box.
- To select a single command **left click, press and release** the command.
- To select multiple commands **left click, press and hold and drag** to highlight the commands.
- To select multiple commands **hold the CTRL button** down on the keyboard. With the CTRL button held down, **left click press and release** commands to be removed.
- Click **Remove Macro(s) Step**.
- The command/s have been removed from the **button**.

Changing IR routing after a single IR command has been assigned to a button.

- Select the **button** or **trigger** to change the IR routing.
- Click **Edit Sequence**.
- Select the IR command from the text box.
- Select the **System** checkbox if you want to transmit the IR command out the VIA!'s System RJ45 connector.
- Select the **Local** checkbox if you want to transmit the IR command out the VIA!'s Local RJ45 connector.
- Select both the **System** and **Local** checkboxes if you want to transmit the IR command out both the VIA!'s System and Local RJ45 connectors.



- The IR routing has been changed.

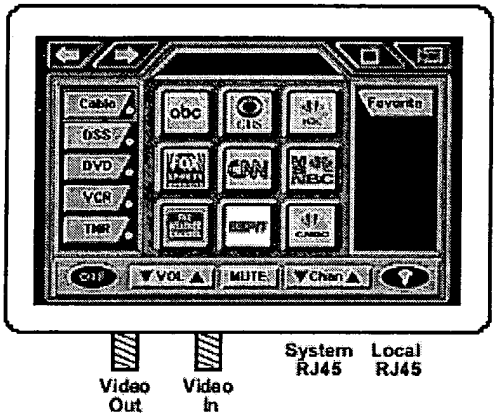
Change the Delay time

- Double click the **Delay Command** from the list.
- A dialog box automatically displays.
- Select the **desired delay time**.
- Click **OK**.
- The **Delay Command** has been changed.

IR Routing

IR Routing

The VIA! has the ability to route IR commands out one or both of it's port; System or Local.



There are three ways to route IR:

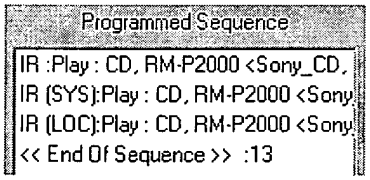
- **Initially adding an IR command to a button** See PG **28**.
- **Changing IR routing after a single IR command has been assigned to a button** See PG **29**.
- **Changing all IR commands assigned to a source at once** See PG **29**.

After the IR has been added, you can determine what port the IR is transmitting out by the IR's prefix.

If the IR command has **IR : (SYS):** The IR command is transmitting out the System port.

If the IR command has **IR : (LOC):** The IR command is transmitting out the Local port.

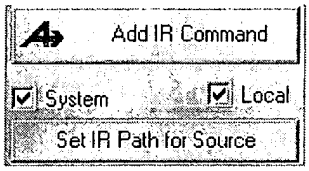
If the IR command has **IR :** The IR command is transmitting out the both ports.



Initially adding an IR command to a button.

- Select the **button** or **trigger** to add IR commands.
- Select the **IR** checkbox in the **Add Command to Button** section.
- Select the ⊞ symbol next to the **IR** manufacture.
- Select the **IRF** file containing the IR commands.

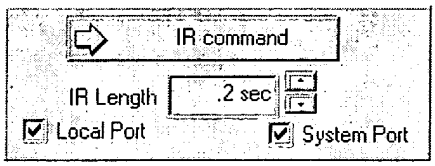
- Select the **IR** command from the **Commands** text box.
- Select the **System** checkbox if you want to transmit the IR command out the VIA!'s System RJ45 connector.
- Select the **Local** checkbox if you want to transmit the IR command out the VIA!'s Local RJ45 connector.
- Select both the **System** and **Local** checkboxes if you want to transmit the IR command out both the VIA!'s System and Local RJ45 connectors.



- Click **Add IR Command** to add the IR command.
- The **IR** command has been added to the button.

Changing IR routing after a single IR command has been assigned to a button.

- Select the **button** or **trigger** to change the IR routing.
- Click **Edit Sequence**.
- Select the IR command from the text box.
- Select the **System** checkbox if you want to transmit the IR command out the VIA!'s System RJ45 connector.
- Select the **Local** checkbox if you want to transmit the IR command out the VIA!'s Local RJ45 connector.
- Select both the **System** and **Local** checkboxes if you want to transmit the IR command out both the VIA!'s System and Local RJ45 connectors.

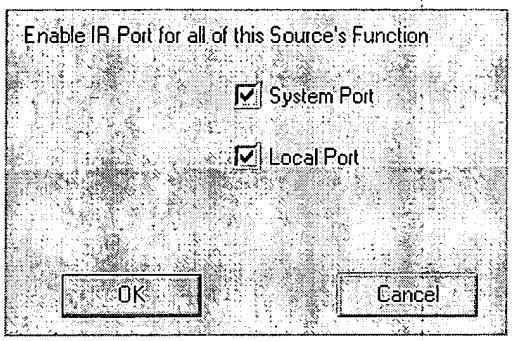


- The IR routing has been changed.

Changing all IR commands assigned to a source at once.

- Select the **Source button** on the **Program Screen** that you want to change all commands.
- Click **Set the IR Path for Source**.
- Select **Yes** at the dialog prompt.

- Select the **System** checkbox if you want to transmit the IR command out the VIA!'s System RJ45 connector.
- Select the **Local** checkbox if you want to transmit the IR command out the VIA!'s Local RJ45 connector.
- Select both the **System** and **Local** checkboxes if you want to transmit the IR command out both the VIA!'s System and Local RJ45 connectors.



- Click **OK**.
- IR commands assigned to the source's function pages are changed to the selected port.

NOTE: IR commands assigned to the source button and special button (i.e. TV, Camera button, Light) are not modified.

General Screen

General Screen

The above Icon represents the **General Screen**.

The **General Screen** enables the installer to document the customer's name, address and any other relevant notes pertaining to the project.

System Screen

System Screen

The above Icon represents the **System Screen**.

The **System Screen** consists of the following:

- **Selecting a System Type** See PG **33**.

This allows VIA!TOOLS to select either **STANDALONE**, **ELAN Z630**, or **ELAN HD system**. Selecting the appropriate system will enable the VIA TOOLS Autobuild feature to automatically program "native" ELAN system commands for you.

- **Adding a Zone** See PG **33**.

Zones are audio/video listening/viewing areas within a home. They provide family members a means to listen to different audio from any other zone in the house. A zone can consist of a single room within a home or a combination of room and/or floors within a home.

- **Removing a Zone** See PG **33**.
- **Renaming a Zone** See PG **34**.
- **Adding a Blank VIA! Panel in Zone** See PG **34**.
- **Adding a VIA! Template Panel in Zone** See PG **34**.
- **Adding a Blank ZPAD Panel in Zone** See PG **34**.
- **Adding a ZPAD! Template Panel in Zone** See PG **35**.

A template is a complete panel that has been saved to the authoring computer with buttons programmed or not programmed by the programmer.

A panel can consists of a **VIA!** or **ZPAD**. ELAN recommends a maximum of four panels in a zone. More than four devices could cause IR Flooding if every panel is transmitting IR at the same time.

- **Removing a Panel in Zone** See PG **34**.
- **Renaming a Panel in Zone** See PG **35**.
- **Save a Panel to Template to File** See PG **35**.

A VIA! Template is a VIA! panel that has already been programmed and saved to the authoring computer by the programmer. It can contain sources, function pages and/or function buttons programmed and/or not programmed with IR and/or Serial commands.

- **Copying Programmed VIAs/ZPADs to other VIAs/ZPADs** See PG **35**.

Copying one panel to another will allow you to quickly re-create panels and assign them to the appropriate location in the house.

- **SC4 Checkbox** See PG **36**.

The **SC4 Checkbox** displays or removes the **SC4 Screen** icon. The **SC4 Screen** allows the programming of the SC4's four communication ports.

- **Z880 Checkboxes** See PG **36**.

The **Z880 checkbox** displays or removes the **Z880 Screen**. The **Z880 Screen** allows the programming of up to 3 Z880s.

- **Invert Screen Checkbox** See PG **36**.

The **Invert Screen** checkbox actually inverts the graphics and video displayed on the VIA!.

NOTE: Use this feature if a VIA! needs to be hung upside down from underneath a kitchen cabinet. This will ensure the cables are not in the view of the customer.

- **Local SR1 Checkbox** See PG **37**.

The **SR-1 Checkbox** displays or removes the **Local SR1 Triggers** checkbox on the **Triggers Screen**. The **Local SR1 Triggers** allow the programming of eight sense on/off sequence triggers.

- **Manual Camera Access Checkbox** See PG **38**.

The **Manual Camera Access** checkbox displays or removes the **Camera Screen** icon.

Selecting a System Type

- Click **System Type**.
- Select the appropriate **System** and click **OK**.
- The **System Type** has been changed.

Adding a Zone

- Select an unused location in the **Zones in this Project** text box.
- Click **ADD** below the **Zones in this Project** text box.
- The **Zone** has been added.

Removing a Zone

- Select a **Zone** in the **Zones in this Project** text box.
- Click **Remov** below the **Zones in this Project** text box.

- Click **OK** at the conformation dialog box.
- The **Zone** has been removed.

Renaming a Zone

- Select a **Zone** in the **Zones Available in Project** text box.
- Click **EDIT** below the **Zones Available in Project** text box.
- Select **Rename Zone** from the pop up menu.
- Type in the **new name** in the text field and click **OK**.
- The **Zone** has been renamed.

Adding a Blank VIA! Panel in Zone

- Select a **Zone** that the **Panel** will be added.
- Select an unused location in the **Panels and Keypads in this Zone** text box and click **ADD**.
- Click **New VIA!**.
- The **Panel** has been added.

Adding a VIA! Template Panel in Zone

- Select a **Zone** that the **Panel** will be added.
- Select an unused location in the **Panels and Keypads in this Zone** text box and click **ADD**.
- Click **Selected Template VIA!**.
- The **Template Panel** has been added.

Adding a Blank ZPAD Panel in Zone

- Select a **Zone** that the **Panel** will be added.
- Select an unused location in the **Panels and Keypads in this Zone** text box and click **ADD**.
- Click **New ZPAD.**
- Select **Z100** or **Z200** ZPAD.
- Click **OK**.
- The **Panel** has been added.

Adding a ZPAD! Template Panel in Zone

- Select a **Zone** that the **Panel** will be added.
- Select an unused location in the **Panels and Keypads in this Zone** text box and click **ADD**.
- Click **Selected Template ZPAD**.
- The **Template Panel** has been added.

Removing a Panel in Zone

- Select a **Panel in Zone** in the **Panels and Keypads in this Zone** text box that will be removed.
- Click **Remove** below the **Panels and Keypads in this Zone** text box.
- Click **YES** at the conformation dialog box.
- The **Panel** has been removed.

Renaming a Panel in Zone

- Select a **Panel in Zone** in the **Panels and Keypads in this Zone** text box.
- Click **EDIT** below the **Panel in the Selected Zone** text box.
- Select **Rename** from the pop up menu.
- Type in the **new name** in the text field and click **OK**.
- The **Panel in Zone** has been renamed.

Save a Panel to Template to File

- Select a **Zone** that the **Panel** to save is assigned.
- Select a **Panel** to be saved in the **Panels and Keypads in this Zone** text box.
- Select **EDIT** below the **Panels and Keypads in this Zone** text box.
- Select **Save to Template File** from the pop up menu.
- Type in the **name** of the VIA! Template and click **OK**.
- The **Template Panel** has been saved.

Copying Programmed VIAs/ZPADs to other VIAs/ZPADs

- Select the **Panel** you want to copy.
- Click **EDIT** below the **Panels and Keypads in this Zone** text box.
- Select **Copy to other Panel(s) or K ypad(s)** from the pop up menu.

- **Copy/Update VIAs** dialog box displays. The smaller **Selected VIA!** text box displays the VIA! to be copied. The larger **Copy To** text box lists all panels that can be copied to.
- Select the **panel** to be copied to from the larger **Copy To** text box.
- Select the **Copy SC-4 Commands** checkbox to copy SC4 serial commands.
- Click **Copy**.
- The **panel** has been copied.

NOTE: If no panels are listed in the larger **Copy To** text box, you will have to add **blank panels** in a zone.

SC4 Checkbox

- Select the **SC4** checkbox.
- The **SC4 Screen** is displayed or removed.

NOTE: The **SC4 Checkbox** displays or removes the **SC4 Screen** icon. The **SC4 Screen** allows the programming of four Communication ports.

Z880 Checkboxes

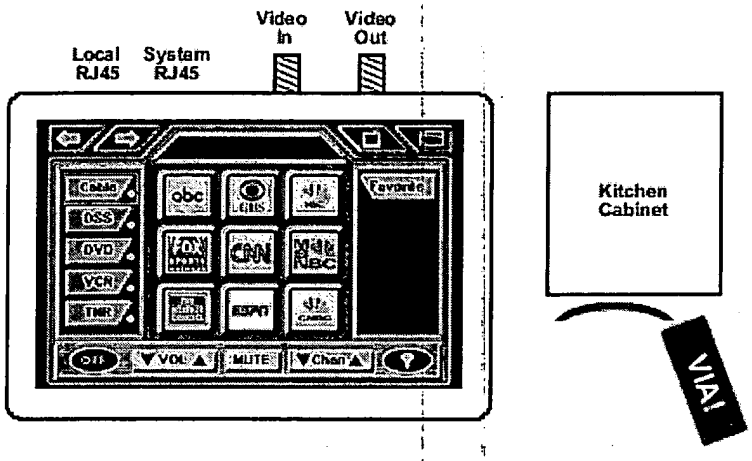
- Select the **Z880** checkbox.
- The **Z880 Screen** is displayed or removed.

NOTE: The **Z880** checkbox displays or removes the **Z880 Screen**. The **Z880 Screen** allows the programming of up to 3 Z880s.

Invert Screen Checkbox

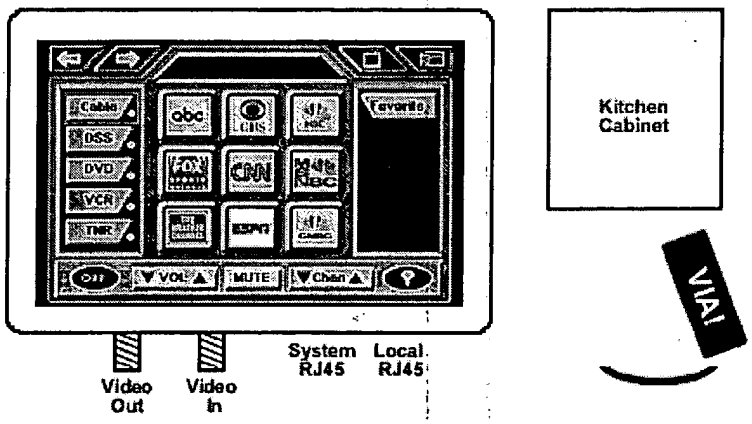
The Invert Screen checkbox actually inverts the graphics and video that the VIA! displays. Use this feature if a VIA! needs to be hung upside down from underneath a kitchen cabinet. This will ensure the cables are not in the view of the customer.

With the Invert Screen checkbox checked.



NOTE: The cables are not in view of the customer.

With the Invert Screen checkbox unchecked.



NOTE: The cables are in the view of the customer.

Local SR1 Checkbox

- Select **a Panel in Zone** to display the **SR-1** checkbox in the **Local Components** field.
- Select the **SR-1** checkbox.
- The **Local SR1 Triggers** checkbox is displayed or removed on the **Trigger Screen**.

NOTE: The **SR-1** Checkbox displays or removes the **Local SR1 Triggers** checkbox on the **Triggers Screen**. The **Local SR1 Triggers** allow the programming of **eight sense on/off sequence** buttons.

Manual Camera Access Checkbox

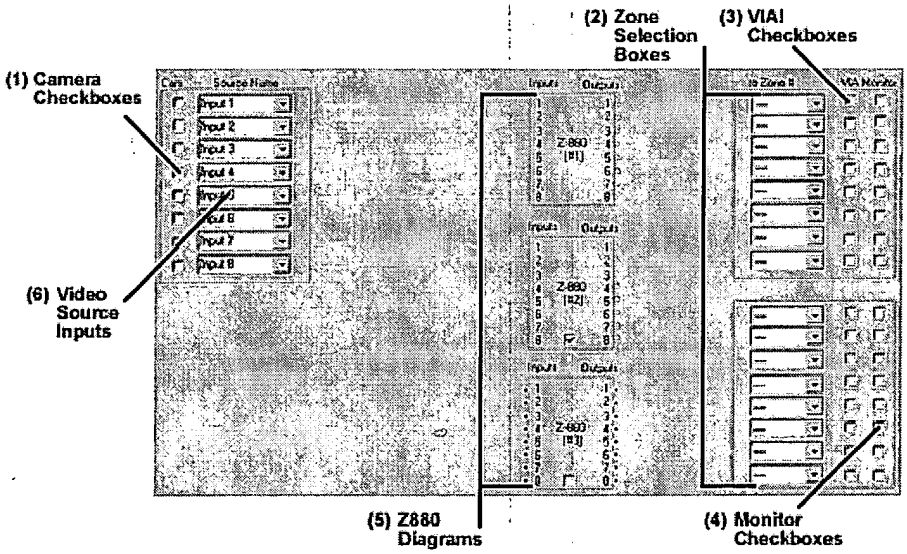
- Select a **Panel in Zone** to display the **Manual Camera Access** checkbox in the **Local Components** field.
- Select the **Manual Camera Access** checkbox.
- The **Camera Screen** Icon is displayed or removed.

Z880 Screen

Z880 Screen

The above Icon represents the **Z880 Screen**.

The **Z880 Screen** allows VIA!TOOLS to Autobuild **Source buttons** and the **Camera Screen** with Z880 commands. This will allow the appropriate video to be routed either to a television or to a VIA! when a source button is pressed. It will also allow the hidden **Next Camera**, **Previous Camera**, **Scan On** and **Scan Off** buttons to know what cameras to display when the **Special Camera Button** is pressed.



Camera Checkboxes

- Check these if the video input is a camera. Upon Autobuild, VIA!TOOLS checks which checkboxes are checked and assigns the appropriate Z880 commands on the **Camera Screen**. When assigned, the hidden buttons, **Next Camera**, **Previous Camera**, **Scan On** and **Scan Off** displays the appropriate camera video.

Video Source Inputs

- This will be used on the **SetUp Screen** to associate it to a source button.
- Select a video source name, DVD, VCR, DSS, etc...

Z880 Screen

Z880 Diagrams

- The **Diagrams** represent 3 Z880s. You must physically wire your Z880s according to the programming on this screen.

Zone Selection Boxes

- These assign a **Z880 output** to a project **Zone**.
- The top set of 8 dropdown boxes belong to **Z880 Diagram #1**.
- The bottom set of 8 dropdown boxes belong to **Z880 #2** if the **Z880 #2 Diagram** checkbox is checked.
- The bottom set of 8 dropdown boxes belong to **Z880 #3** if the **Z880 #3 Diagram** checkbox is checked.

VIA! Checkboxes

- Check this if you want video routed to a VIA! in the zone that is listed in the to **Zone # dropdown** checkboxes.

Monitor Checkboxes

- Check this if you want video routed to a television in the zone that is listed in the to **Zone # dropdown** checkboxes.

SC4 Screen


SC-4

SC4 Screen

The above Icon represents the **SC4 Screen**.

The SC-4 System Controller is an RS232 system network interface. It enables up to 30 VIA! Panels to access up to four RS232 controllable sub-systems; lighting, security, climate control, and A/V components. Additionally, the SC-4 features one "**ELAN RS232 Out**" port, which enables serial control of ELAN products without sacrificing one of the DB-9 COMM ports. ELAN serial products are the **HD Series MCU**, **SR-1 Sense/Relay Module** and **Z880 Video Controller**.

The **SC4 Screen** consists of the following:

- **Add a Pre-Written Serial driver** See PG **42**.

  A Pre-Written Serial driver is a file or group of files that consists of serial commands that have been written by ELAN. These files or group of files can be downloaded on ELAN's web page and can be several megabytes of data.

- **Add a Serial Driver Wizard** See PG **42**.

  Serial Driver Wizards are programs that create a file of serial commands. Unlike pre-written serial drivers, serial driver wizards are small - around 35 kilobytes - and you choose the exact commands you want to assign to a port.

- **Remove all programming from a communication port** See PG **42**.
- **Edit Comm Port Settings** See PG **42**.

  The SC4 must be instructed how to send the serial commands to the system under controlled. The Edit section allows you to choose the Baud Rate, Byte Size, Parity and Stop Bits. The Baud Rate settings can be found the protocol manual provided by the manufacture of the system to be controlled.

- **Test serial commands** See PG **43**.

  Testing serial commands aids in troubleshooting by bypassing all ELAN components. The serial commands are sent from the computer to the controlling system.

- **Transferring to the SC4** See PG **43**.

  Transferring to the SC4 downloads the conversion table and all serial commands.

- **Add a Two-Way Driver** See PG **43**.

  Two-Way Drivers allow a user to control a device serially and receive status of the device to display on the VIA!.

Add a Pre-Written Serial Driver

- On the **System Screen** check the **SC4** checkbox in the **System Components** area.
- Select the **SC4 Screen**.
- Click **ADD/REMOVE** on one of the Comm Ports.
- Type in the **Device Name**.
- Click **Pre-Written Serial Driver (One-Way)**.
- From the **Open** dialog box, navigate to the **serial driver file** and click **Open**.
- The **serial commands** are assigned to the port.

Add a Serial Driver Wizard.

- On the **System Screen** check the **SC4** checkbox in the **System Components** area.
- Select the **SC4 Screen**.
- Click **ADD/REMOVE** on one of the Comm Ports.
- Type in the **Device Name**.
- Click **Serial Driver Wizards (One-Way)**.
- Select a **Serial Driver Wizard** from the list and click **OK**.
- Make the appropriate selections from the dropdown and list boxes and click **Save**.
- The **serial commands** are assigned to the port.

Remove all programming from a communication port.

- On the **System Screen** check the **SC4** checkbox in the **System Components** area.
- Select the **SC4 Screen**.
- Click **ADD/REMOVE** on one of the Comm Ports.
- Click **Remove**.
- Programming has been removed from the port.

Edit Comm Port Settings.

- On the **System Screen** check the **SC4** checkbox in the **System Components** area.
- Select the **SC4 Screen**.
- Click **EDIT** on one of the Comm Ports.
- Click **EDIT** in the **SC4 Comm Port Settings** section.
- Select a **Baud Rate**, **Byte Size**, **Parity** and **Stop Bits** and click **OK**.

Test serial commands.

- On the **System Screen** check the **SC4** checkbox in the **System Components** area.
- Select the **SC4 Screen**.
- Click **EDIT** on one of the Comm Ports.
- Select a **serial command** to be tested from the **Commands** text box.
- Click **Test**.

NOTE: The authoring computer must be connected from it's communication port directly to the system to be controlled, bypassing all ELAN components.

Transferring to the SC4.

- On the **System Screen** check the **SC4** checkbox in the **System Components** area.
- Select the **SC4 Screen**.
- Click **Transfer**.
- Click **Start**.

Add a Two-Way Driver (See Application 6 PG 173)

- On the **System Screen** check the **SC4** checkbox in the **System Components** area.
- Select the **SC4 Screen** Icon.
- Click **ADD/DELETE** on one of the Comm Ports.
- Type in the **Device Name**.
- Click **Two-Way Serial Drivers**.
- Select a **System**.
- Click **OK**.

HAI

- Select a HAI **System** type.
- Select a HAI **Console Address**.
- Click **OK**.
- HAI has been added to the port.

NOTE: The **VIA!'s** Unit ID must be different than **HAI's keypads** Console Address. See HAI's documentation to verify HAI's Console addresses.

APEX

- Apex has been added to the port.

Aprilaire

- Select the **total number** of Aprilaire zones that will be in the system.
- Click **OK**.
- Select **H/C (Normal)**, if you have a heat pump select **Heat Pump**.
- Click **OK**.
- Select the zone that has a Remote sensor or select **No Remote Sensor Installed**.
- Click **OK**.
- Aprilaire has been added to the port.

Motif Screen

Motif Screen

The above Icon represents the **Motif Screen**.

Motifs are overall background and button styles. There are 80 different Motifs.

The **Motif Screen** consist of the following:

- **Select a Motif** See PG **45**.
- **Select a Button Font** See PG **46**.

Button font can be changed for all buttons. It cannot be different from one button to another.

- **Add individual Independent buttons** See PG **46**.

Independent buttons are graphical representations of television station logos.

- **Remove individual Independent buttons** See PG **46**.
- **Add All Motif Independent Buttons** See PG **46**.
- **Remove All Motif Independent Buttons** See PG **46**.

Select a Motif:

- Click **Change Motif**.
- Select a **Motif** from the list.
- A visual representation of the **Motif** is displayed.
- Click **OK**.
- If **Series 2001** is chosen, four columns display.
- Choose one **item** from each column.
- Seventy-two different Motifs are generated depending on which selections are made.
- Click **OK**.
- Click **OK**.

Select a Button Font:

- Click **Change Font**.
- Select a **Font**, **Font Style** and **Size**.
- Click **OK**.

NOTE: Effects, Color, Sample and Script are not operational.

Add individual Independent buttons.

- Select an **Independent Button** from the **Motif Independent Button** text box.
- The selected **Independent Button** is displayed on the screen.
- Click **Add Button**.

NOTE: Although you can add one Independent button at a time, it is recommended that all Independent buttons are added by **Adding All Motif Independent buttons**.

Remove individual Independent buttons.

- Select the **Independent Button** from the Button Bucket.
- Click **Remove Button**.

Add All Motif Independent Buttons.

- Click **Add All**.
- All **Independent Buttons** are added to the Button Bucket.

Remove All Motif Independent Buttons.

- Click **Remove All**.
- All **Independent Buttons** are removed from the Button Bucket.

Layout Screen

Layout Screen

The above Icon represents the **Layout Screen**.

The **Layout Screen** is where you begin to design your panel. **Source Buttons**, **Function pages** and **Function Buttons** are placed and aligned on the VIA! panel.

The **Layout Screen** consists of the following:

- **Add a Blank Source Button** See PG **54**.
- **Add a Source Button from file** See PG **54**.

A **Source Button** from file is a programmed source button that was saved to the authoring computer with or without buttons programmed with IR.

- **Add a Special Component Source Button: VIA! Music, Audio Request, etc...** See PG **55**.

- **Add a Two-Way Component** Source button See PG **55**.

Two-Way Source Buttons allow a user to control a device serially and receive status of the device to display on the VIA!.

You must use a SC4 to get this feature to operate properly.

- **Add a Chimes Source button** See PG **56**.

You must be in **System Type HD** and use a **SC4** to use this feature. A Chimes source button allows an End User to change Doorbell #1 from 1 to 8 different chimes in a HD system.

- **Add a Multi Zone HD Source Select source button** See PG **56**.

You must be in **System Type HD** and use a **SC4** to use this feature. This feature automatically builds a HD source button that allows the end user to control other zones from a single VIA! panel.

- **Remove a Source Button** See PG **57**.
- **Move Source buttons up or down in the source list** See PG **57**.
- **Save a Source Button to file** See PG **57**.

Saving Source Buttons allow you to quickly reuse all programming without having to manually recreate the page every time it is needed. Source Buttons can be saved with or without IR commands.

- **Rename a Source Button** See PG **58**.
- **Add a Blank Function page** See PG **58**.
- **Add a Function page from file** See PG **58**.
- **Remove a Function page** See PG **59**.
- **Save a Function page to file** See PG **59**.

Saving Function Pages allow you to quickly reuse all programming without having to manually recreate the page every time it is needed. Function Pages can be saved with or without IR commands.

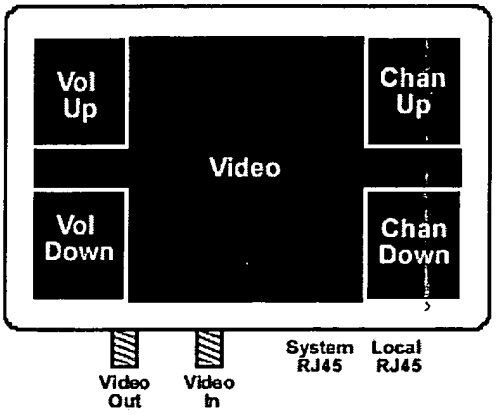
- **Rename a Function page** See PG **59**.
- **Add a Light Button** See PG **59**.
- **Remove the Light button** See PG **59**.
- **Add a Light Function page** See PG **60**.

Adding a Light's Function Page will enable you to press the Light's icon and access a Function Page dedicated to your lighting control system.

- **Remove a Light Function page** See PG **60**.
- Video Button

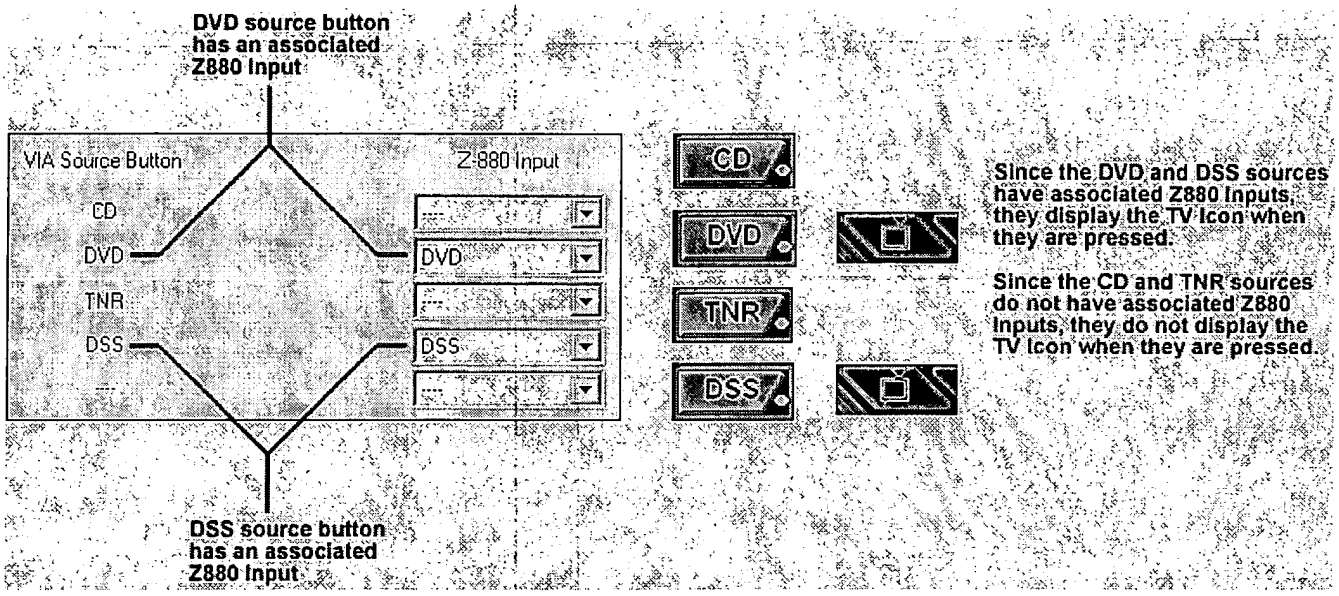
When the Video button is pressed, you have access to **Volume Up**, **Volume Down**, **Channel Up** and **Channel Down** hidden buttons.

The hidden buttons are invisible and superimposed on the VIA! screen when video is displaying.



- **Link a Video Button to a Z880 video source on the SetUp Screen** See PG **60**.

This feature automatically displays a Video button for source buttons if the source buttons on the **SetUp Screen** has been associated with a Z880 input.

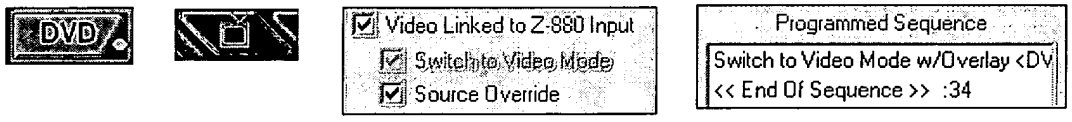


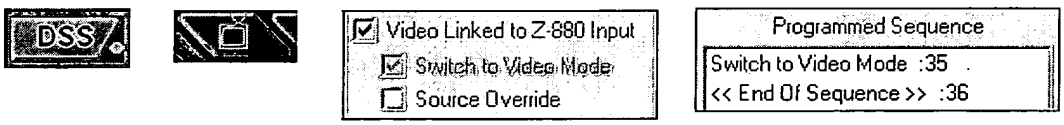
- **Unlink a Video Button to a Z880 video source on the SetUp Screen** See PG **60**.

When you unlink the Video Button to the Z880 video source you are able to display a Video button with or without the Z880 input dropdown box on the SetUp page programmed or not.

- **Override the Video button per Source** See PG **60**.

This feature will allow you to program the Video button with different commands depending on which source button is selected. A **DVD** source button can be programmed with a **Switch to Video Mode w/ Overlay DVD** on the video button but the **DSS** source button can be programmed with a **Switch to Video Mode** on the video button.





- **Add a Camera button to the panel** See PG **61**.

The Camera button is panel specific. It performs the same sequence steps no matter what source has been selected.

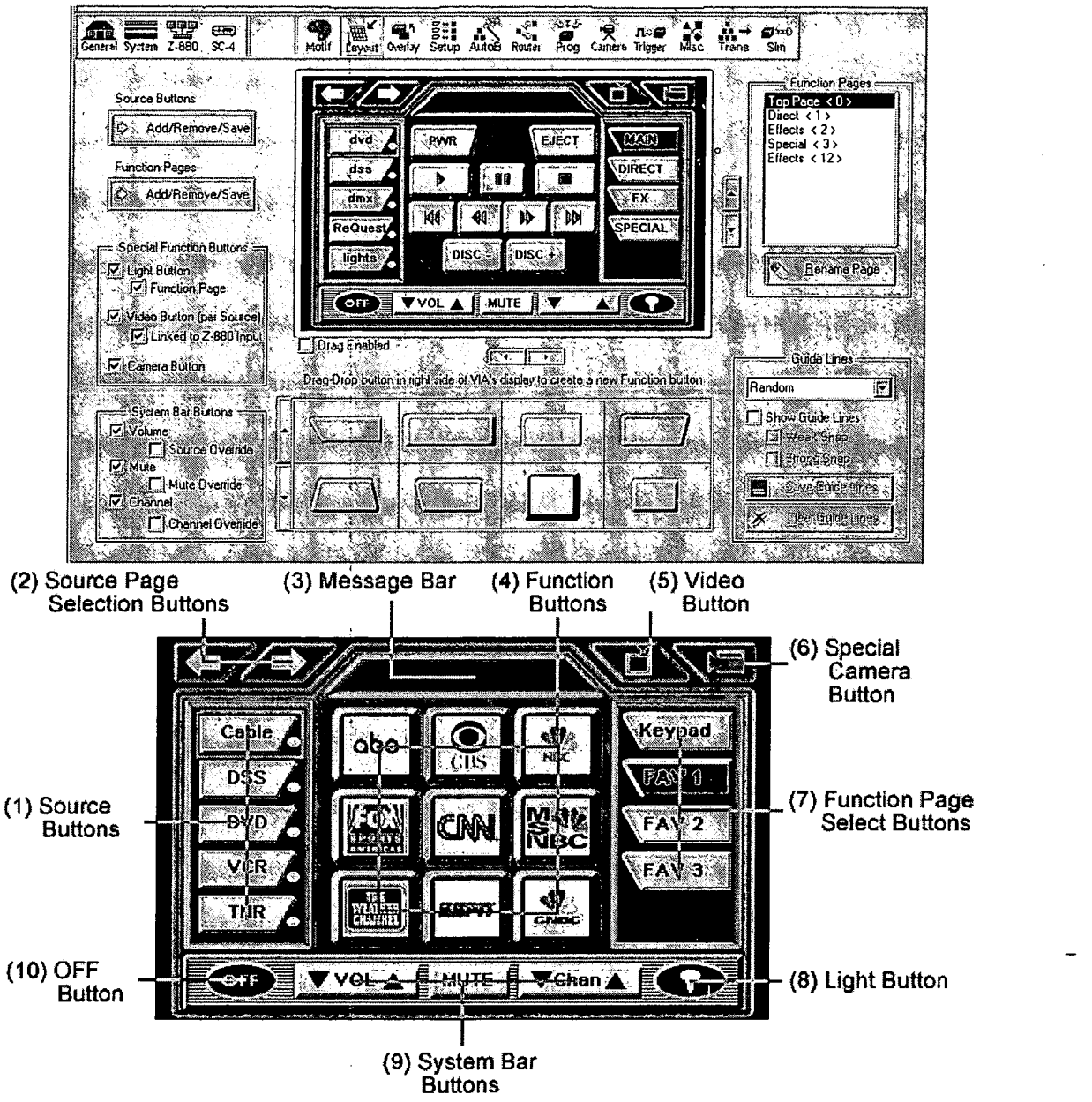
- **Remove a Camera button from the panel** See PG **61**.
- **Add System Bar Buttons to a panel** See PG **61**.
- **Remove System Bar Buttons from a panel** See PG **61**.
- **Rename System Bar Buttons.** See PG **61**.
- **Enable Source Override to System Bar Buttons** See PG **61**.

Source override allows you to assign IR or Serial commands to a System Bar Button on the selected source without programming other Source's System Bar Buttons.

- **Add a Function Button to the VIA!** See PG **61**.
- **Remove a Function Button from the VIA!** See PG **62**.
- **Rename a Function Button** See PG **62**.
- **Move Function Buttons from one location to another using your mouse** See PG **62**.
- **Move Function Buttons from one location to another using precision arrows** See PG **63**.
- **Align Function buttons using Random Guidelines** See PG **63**.
- **Align Function buttons using Fixed Guidelines** See PG **64**.
- **Save Guideline Patterns** See PG **65**.
- **Delete Guideline Patterns** See PG **66**.
- **Assign a Function Page jump Command to a button** See PG **66**.

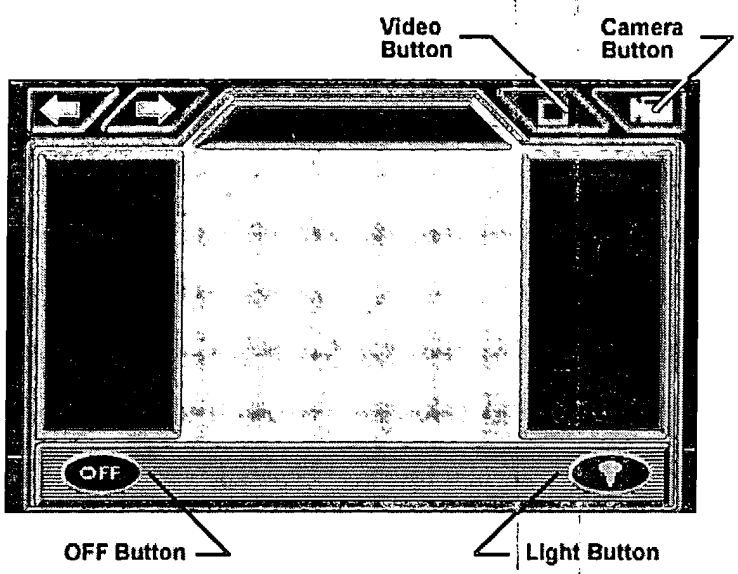
For customers to navigate from one Function Page to another, you must add Function Page Jumps to Function Buttons.

Layout Screen



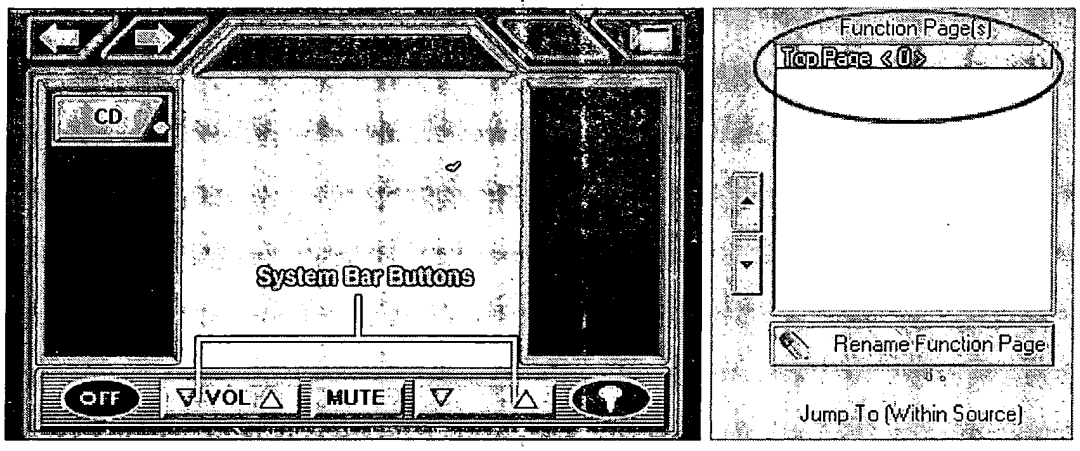
Prior to adding a Source Button, VIA!TOOLS displays a Video button, Camera button, OFF button and Light button. These buttons are the same for any source you add. No matter what source button is selected, these buttons will perform the same programming steps.

NOTE: The Video Button can be overridden. Meaning it can be programmed differently from one source to another by **Overriding the TV button per Source**.



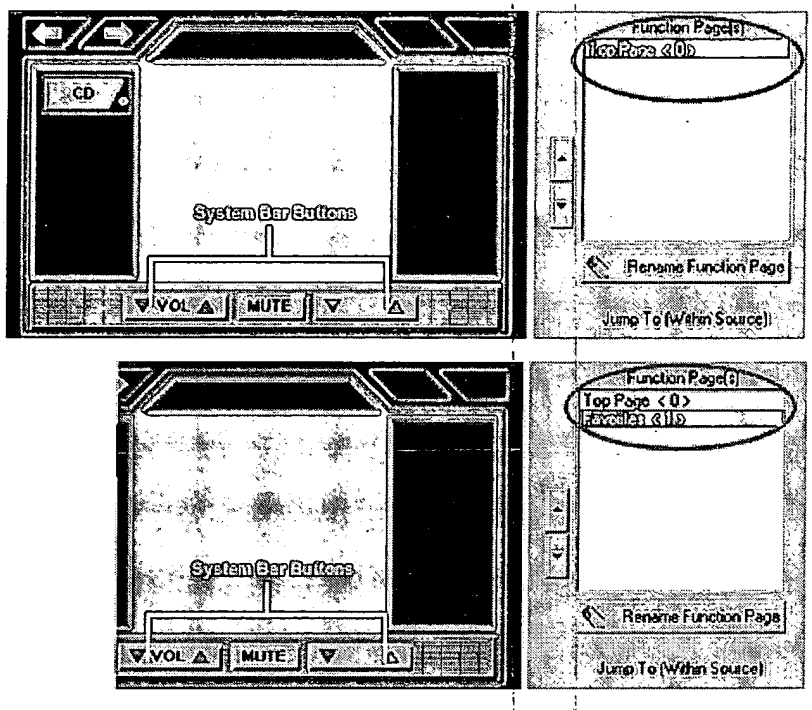
When a **Source Button** is added, a **Top Page** function page is automatically generated.

Each function page is automatically assigned with **System Bar Buttons**.

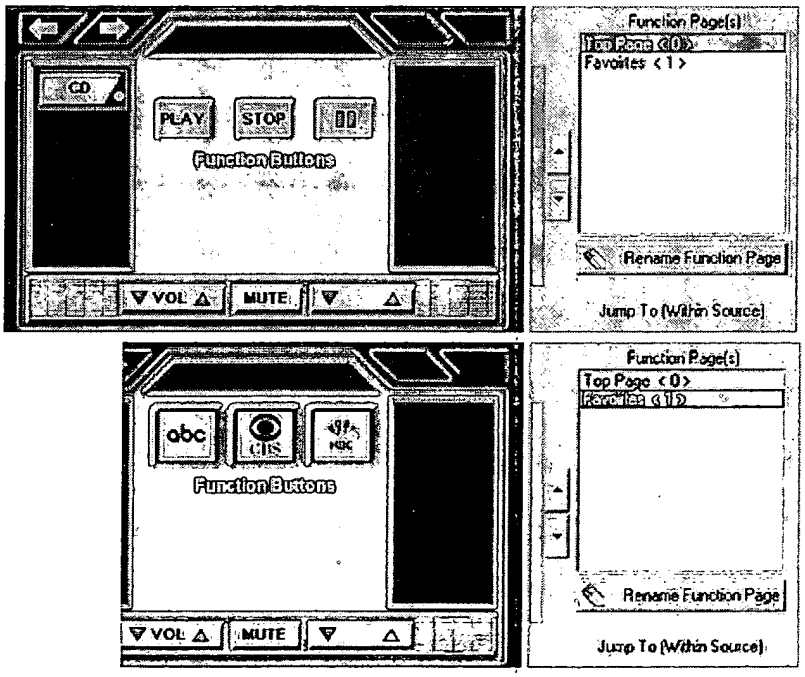


A source button can have other **Function Pages**.

Layout Screen

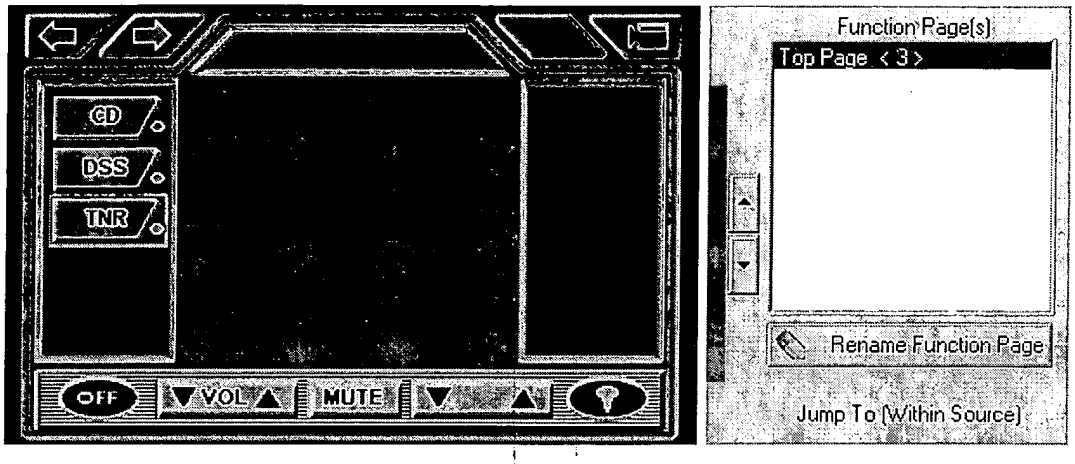


Each **Function Page** has it's own **Function Buttons**. **Function Buttons** could be **Play**, **Stop** or **Pause** or **ABC**, **NBC** or **CBS**.



Layout Screen

A panel can consist of multiple sources. They are also automatically assigned a **Top Page** function page.



The **System Bar Buttons** on the **CD**, **DSS** and **TNR** sources are the same buttons. If you program the **CD Vol Up** button with a **Kenwood Vol Up** command, the **DSS** and **TNR Vol Up** buttons are also programmed with the **Kenwood's Vol Up**.

If you want to be able to program the **CD's Vol Up** button with a **Kenwood's Vol Up** command but not programmed the **DSS's** and the **TNR's Vol Up** with the command, select the **Volume Source Override** checkbox for **CD**.

Add a Blank Source Button.

- Click **ADD/REMOVE/SAVE** source button.
- Select an **unused source** location.
- Click **New Source**.
- Type in the **Source Button** name and click **OK**.
- Click **Done**.
- The **Source Button** has been added.

Add a Source Button from file.

- Click **ADD/REMOVE/SAVE** source button.
- Select an **unused source** location.
- Click **Source From a File**.
- Type in the **Source Button** name and click **OK**.
- Navigate to the source you want to add and select it.
- Click **Open**.

- Click **Done**.
- The **Source Button** has been added.

Add a Special Component Source Button: VIA! Music, Audio Request, Escient Fireball and Escient Tunebase.

- Click **ADD/REMOVE/SAVE** source button.
- Select an **unused source** location.
- Click **Special Component**.
- Select the **Special Component** type.
- Click **OK**.
- Type in the **Source Button** name and click **OK**.
- Click **Done**.
- The **Source Button** has been added.

Add a Two-Way Component Source button (See Application 6 PG 173)

- Click **ADD/REMOVE/SAVE** source button.
- Select an **unused source** location.
- Click **Two-Way Component**.

HAI

- Select a **System**.
- Select a **Comm Port**.
- Click **OK**.
- Type in a name for the source button.
- Click **OK**.

NOTE: If a partition exists, it needs to be established in the HAI system.

APEX

- Select a **System**.
- Select a **Comm Port**.
- Click **OK**.

- Select the **partition** the VIA! will be installed in.
- Click **OK**.
- Type in a name for the source button.
- Click **OK**.

APRILAIRE

- Select a **System**.
- Select a **Comm Port**.
- Click **OK**.
- Select the **Zone** the VIA! will emulate.
- Select **Fahrenheit** or **Celsius**.
- Click **OK**.
- Type in a name for the source button.
- Click **OK**.

NOTE: If a comm port is unable to be selected, **assign a Two-Way Driver** to a **SC4 Screen's Comm Port**.

Add a Chimes Source button.

- Click **ADD/REMOVE/SAVE** source button.
- Select an **unused source** location.
- Click **Chimes Selection**.

NOTE: If the **Chimes Selection** button is light gray and unable to be selected, ensure the **System Type** on the **System Screen** is **HD** and the **SC4** checkbox on the **System Screen** is checked.

- Type a **Source Button** name and click **OK**.
- Click **Done**.
- The **Source Button** has been added.

NOTE: All Serial programming is automatically assigned to the buttons.

Add a Multi Zone HD Source Select source button. (See Application 7 PG 190)

- Ensure all Zones to be controlled are added on the **System Screen**.
- Ensure all Sources to be controlled in any of the given zones, are added to the **Layout Screen**.

- Click **ADD/REMOVE/SAVE** Source Button on the **Layout Screen**.
- Select an **unused source** location.
- Click **Multi Zone HD Source Select**.

  NOTE: If the **Multi Zone HD Source Select** button is light gray and unable to be selected, ensure the **System Type** on the **System Screen** is in **HD** and the **SC4** checkbox on the **System Screen** is checked.

- Type in a Source Button **name**.
- Select **HD Template 1**.
- Click **OK**.
- Select the **Zones** to be controlled in the **Available Zones** list box and click **ADD**.
- Select the **Sources** to be controlled in the **Available Sources** list box and click **ADD**.
- Click **OK**.
- Click **DONE**.

  NOTE: All Serial programming is automatically assigned to the buttons.

Remove a Source Button.

- Click **ADD/REMOVE/SAVE** source button.
- Select the **source** to be removed.
- Click **Remove Selected Source**.
- Click **Done**.
- The **Source Button** has been removed.

Move Source buttons up or down in the source list.

- Click **ADD/REMOVE/SAVE** source button.
- Select the **source** to be moved.
- Click **Move Up** or **Move Down**.
- Click **Done**.
- The **Source Button** has been moved.

Save a Source Button to file.

- Click **ADD/REMOVE/SAVE** source button.
- Select the **source** to be saved.

- Click **Save Source to a file**.
- Type a **name** that the source is to be saved as.
- Click **Save**.
- Click **Done**.
- The **Source Button** has been saved.

Rename a Source Button.

- Right click the **Source Button**.
- Select **Edit** from the pop up menu.
- Type the new name for the source button.
- Click **OK**.
- The source button's name has been changed.

Add a Blank Function page.

- Select the source you want to add a function page.
- Click **ADD/REMOVE/SAVE** function button.
- Click **Add New Page**.
- Double click a name from the list and click **OK** or type in a name in the text box and click **OK**.
- Click **Done**.
- The **Function Page** has been added.

Add a Function page from file.

- Select the source you want to add a function page.
- Click **ADD/REMOVE/SAVE** function button.
- Click **Add Page From a File**.
- Double click a name from the list and click **OK** or type in a name in the text box and click **OK**.
- Navigate to the function page you want to add and select it.
- Click **Open**.
- Click **Done**.
- The **Function Page** has been added.

Remove a Function Page.

- Select the source you want to remove a function page.
- Select the function page to be removed.
- Click **Remove Selected Page**.
- Click **Done**.
- The **Function Page** has been removed.

Save a Function page to file.

- Select the source that contains the function page to be save.
- Click **ADD/REMOVE/SAVE** function button.
- Select the Function Page that will be saved.
- Click **Save to a File**.
- Type the name the function page will be saved as.
- Click **Save**.
- Click **Done**.
- The **Function Page** has been saved.

Rename a Function page.

- Select the source that contains the function page to be renamed.
- Select the Function Page from the **Function Pages** text box.
- Click the **Rename Page**.
- Type the new name for the Function Page.
- Click **OK**.
- The **Function Page** has been renamed.

Add a Light Button.

- Check the **Light Button** checkbox in the **Special Function Buttons** section.
- The **Light Button** is added.

Remove the Light button.

- Uncheck the **Light Button** checkbox in the **Special Function Buttons** section.
- The **Light Button** is removed.

Add a Light Function page.

- Check the **Light Button** checkbox in the **Special Function Button** section.
- Check the Light Button **Function Page** checkbox in the **Special Function Buttons** section.
- The Light Button **Function Page** has been added.

NOTE: To access the Light Function Page in VIA!TOOLS, double click the Lights icon.

Remove a Light Function page.

- Check the **Light Button** checkbox in the **Special Function Button** section.
- Uncheck the Light Button **Function Page** checkbox in the **Special Function Buttons** section.
- Click **Yes** at the prompt.
- The Light Button Function Page has been removed.

Link a Video Button to a Z880 video source on the SetUp Screen.

- Check the **Video Link to Z880 Input** checkbox in the **Special Function Buttons** section.
- To display a Video button for a source button select the **SetUp Screen**.
- Assign a Z880 Input in the **Z880 Input** dropdown box for the Source button you want to have an associated Video button displayed.
- Reselect the **Layout Screen**.
- The **Source button** with a Z880 Input assigned has an associated Video button.

Unlink a Video Button to a Z880 video source on the SetUp Screen.

- Uncheck the **Video Link to Z880 Input** checkbox in the **Special Function Button** section.
- Select a **Source** button you want to display the Video button.
- Check the **Switch to Video Mode** checkbox.
- The **Video button** is displayed for the selected source.

Override the Video button per Source

- Select the **source button** you want to have the Video button overridden.
- Ensure the **Switch to Video Mode** checkbox is checked.
- Check the **Source Override** checkbox.
- The **Video** button can be programmed specific to the selected source.

Add a Camera button to the panel.

- Check the **Switch to Camera Mode** checkbox in the **Special Function Buttons** section.
- The **Camera button** has been added.

Remove a Camera button from the panel.

- Uncheck the **Switch to Camera Mode** checkbox in the **Special Function Buttons** section.
- The **Camera button** has been removed.

Add System Bar Buttons to a panel.

- Select the **Source Button** you want to display **System Bar Buttons**.
- Check the **Volume**, **Mute** or **Channel** checkboxes in the **System Bar Button's** section.
- The **System Bar Buttons** are displayed.

Remove System Bar Buttons from a panel.

- Select the **Source Buttons** you want to remove **System Bar Buttons**.
- Uncheck the **Volume**, **Mute** or **Channel** checkboxes in the **System Bar Button's** section.
- The **System Bar Buttons** are removed.

Rename System Bar Buttons.

- Right click the button to be renamed.
- Select **Edit** from the pop up window.
- Type in the button name and click **OK**.
- The **button** is renamed.

Enable Source Override for System Bar Buttons.

- Select a **Source Button** to override.
- Check the **Source Override**, **Mute Override** or the **Channel Override** checkboxes.
- The **System Bar Button** has been overridden.

Add a Function Button to the VIA!.

- Select a **Source Button** and **Function Page** to add a Function Button.
- Left click, press and hold your mouse over the **object button** in the **Button Bucket**.
- Move your cursor up to the VIA! work area.

NOTE: The cursor turns to a crosshair.

- Release the left mouse button once the crosshair is at the desired position.
- Type in the **button text** or select an Icon from the **Icon list**.

  NOTE: If adding an Icon to the button, you can double-click the Icon. This will add the Icon to the button and click **OK** for you automatically.

- Click **OK**
- The **Function Button** has been added.

Remove a Function Button from the VIA!.

- Right click the button to be removed.
- Select **Remove** from the pop up window.
- Select **Yes** at the conformation dialog window.
- The **button** is removed.

Rename a Function Button.

- Right click the button to be renamed.
- Select **Edit Name** from the pop up window.
- Type in the name in the **text box** or select a symbol and click **OK**.

  NOTE: If adding an Icon to the button, you can double-click the Icon. This will add the Icon to the button and click **OK** for you automatically.

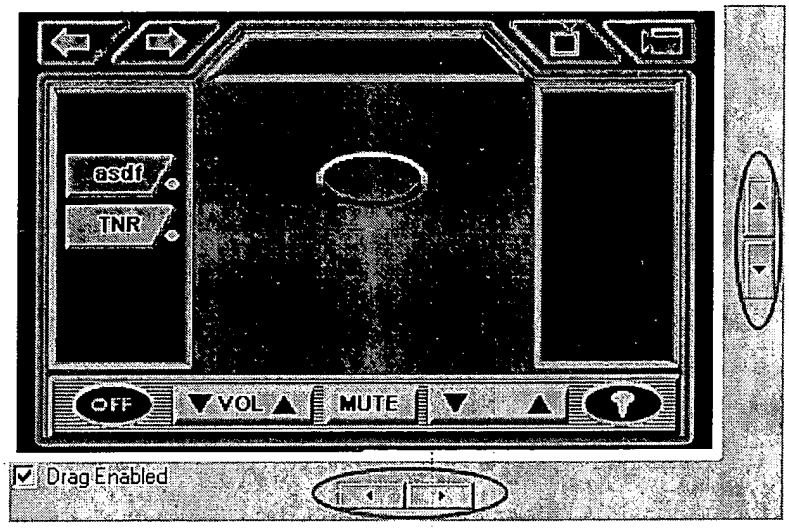
- The **button** is renamed.

Move Function Buttons from one location to another using your mouse.

- Ensure the **Drag Enabled** checkbox is checked.
- Left click, press and hold the **button** to be moved.
- Move the mouse cursor to the desired position.
- When the desired position is reached, release the left button.
- The **button** has been moved.

Move Function Buttons from one location to another using precision arrows.

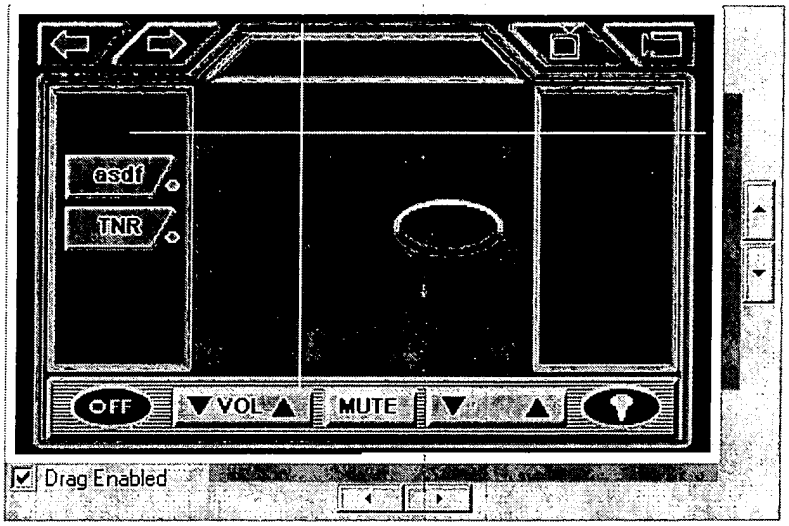
- Select the **button** to be moved.
- Click the **left** or **right** arrow buttons to move the selected button horizontally or click the **up** and **down** arrow buttons to move the selected button vertically.



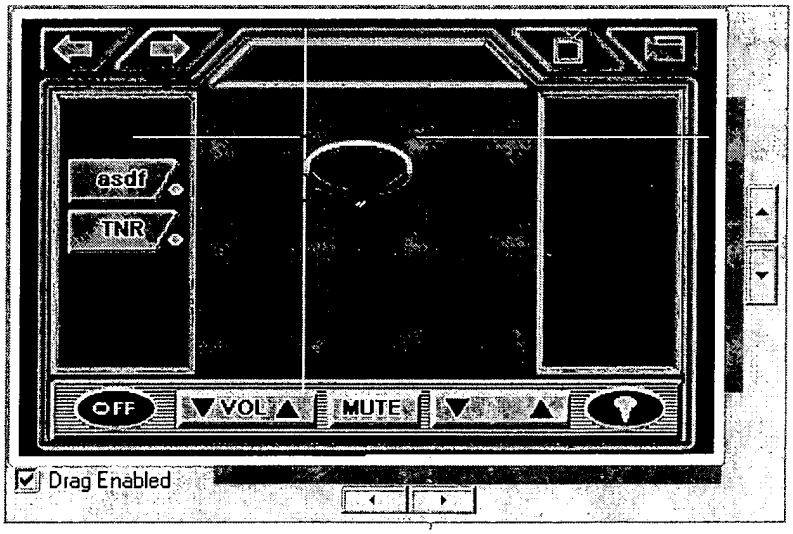
- The **button** has been moved.

Align Function buttons using Random Guidelines.

- Select **Random** from the dropdown box.
- Check the **Show Guidelines** checkbox and the **Strong Snap** checkbox.
- Left click, press hold the **green vertical bar**, and move the mouse to the left.
- When the desired guideline location is achieved, release the mouse button.
- Left click, press hold the **green horizontal bar**, and move the mouse up.
- When the desired guideline location is achieved, release the mouse button.



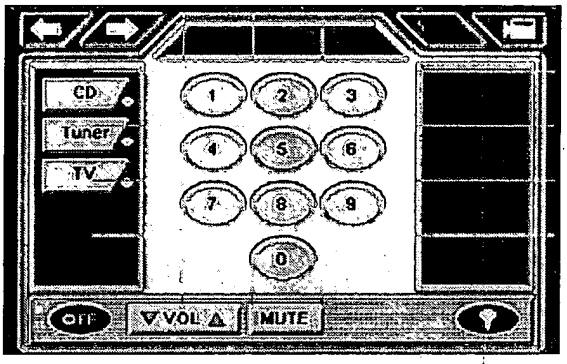
- Left click press and hold the **button** to align.
- Drag the **button** to the **bottom right corner** of the guidelines.
- Release the mouse button.

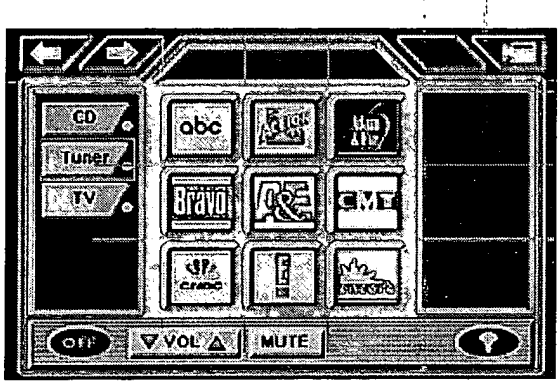


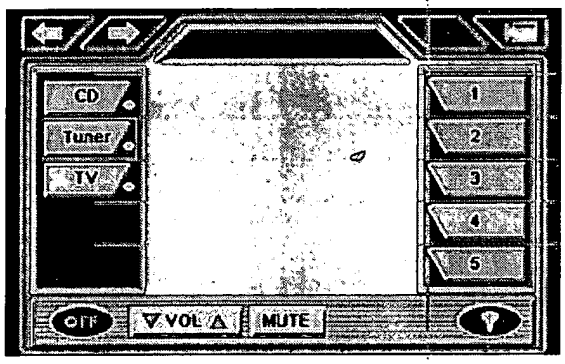
- The button snaps to the guidelines.

Align Function buttons using Fixed Guidelines.

- Select **Number Pad**, **Page Selectors** or **Presets** from the dropdown box.







- Check both the **Show Guidelines** and **Strong Snap** checkboxes.
- Left click press and hold the **button** to align.
- Drag the **button** to the **bottom right corner** of the guidelines.
- Release the mouse button.
- The button snaps to the guidelines.

Save Guideline Patterns

- **Align Function buttons using Random Guidelines.** See PG **63**.
- Once a specific guideline pattern is achieved, click **Save**.
- Type a **name** for the guideline pattern.

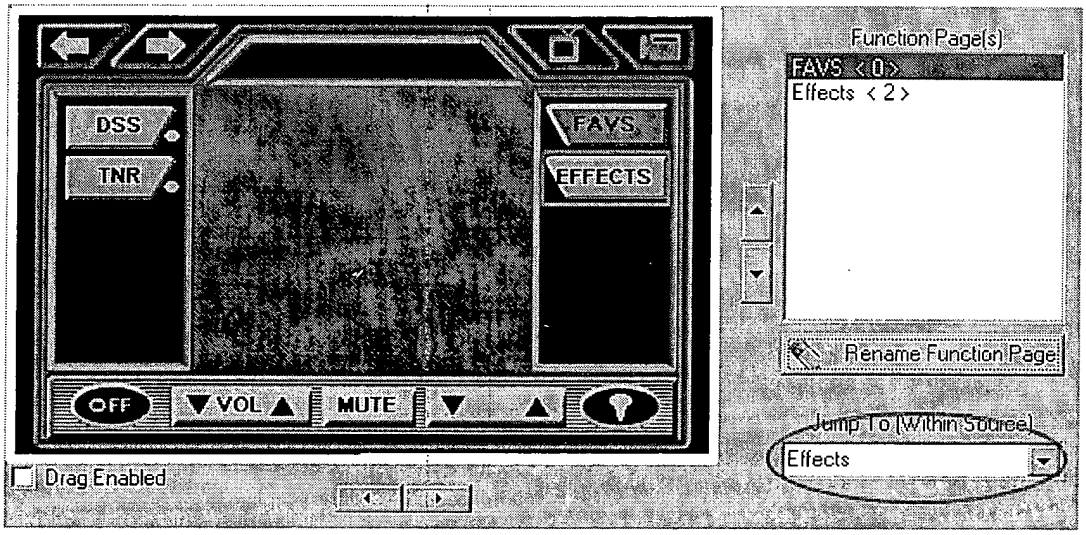
- Click **Save**.
- The Guideline Pattern is saved.

Delete Guideline Patterns

- Select a **Guideline pattern** from the Guideline drop down box.
- Click **Delete**.
- Click **Yes** at the conformation dialog box.
- The **Guideline pattern** is deleted.

Assign a Function Page Jump Command to a button.

- Select a **Function Button** to jump to a Function Page.
- Select a **Function Page** this button will jump to, from the **Jump To (within source)** drop down box.

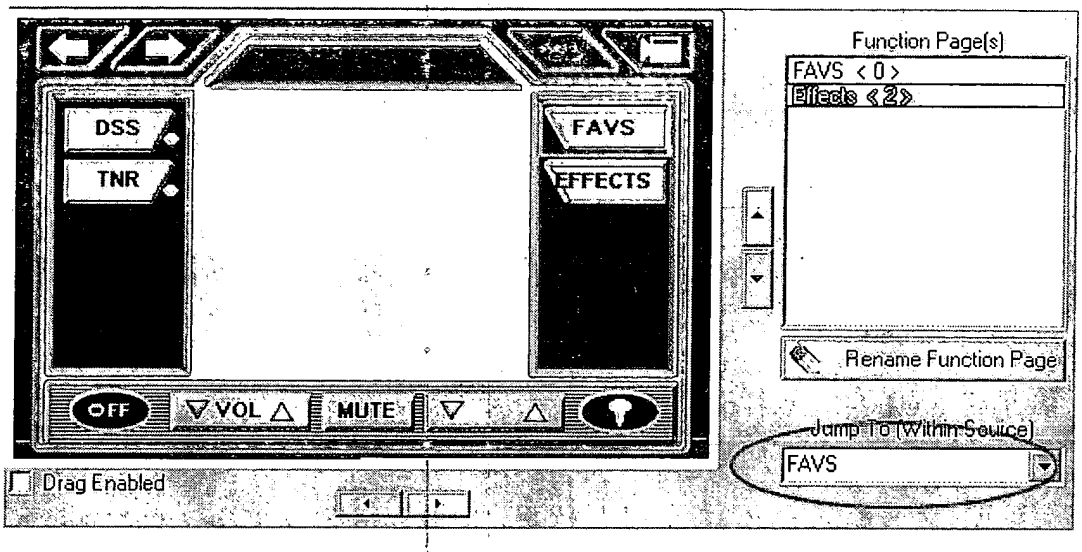


- To test the jump, double click the **Jump To** Function Button.

The Effects function button will jump to or display the Effects Function page when double clicked.

Once on the **Effects** function page, program the **FAVS** function button to jump to the **FAVS** function page.

Layout Screen



The FAVS function button will jump to or display the FAVS Function page when double clicked.

NOTE: You have to double click the Jump To button inside VIA!TOOLS but the customer will only have to single press the button to Jump To a Function Page.

Overlay Screen

Overlay Screen

The above Icon represents the **Overlay Screen**.

The Overlay Screen allows you to assign up to 18 hidden buttons when video is being displayed on a VIA!.

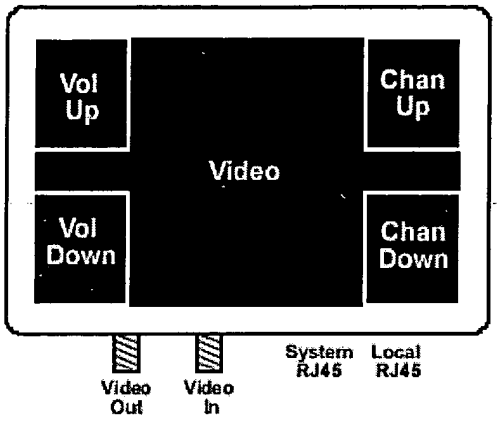
The **Overlay Screen** consists of the following:

- **Add a Blank Page** See PG **70**.
- **Add a Page from File** See PG **70**.
- **Save a Page to File** See PG **70**.
- **Remove a Page** See PG **70**.
- **Rename a Page** See PG **71**.
- **Move a Button** See PG **71**.
- **Resize a Button** See PG **71**.
- **Add a Button** See PG **72**.
- **Remove a Button** See PG **72**.
- **Add IR Commands to a Button** See PG **72**.
- **Add Serial Commands to a Button** See PG **73**.
- **Add an Edit Sequence command** See PG **73**.
- **Change the Delay time** See PG **73**.

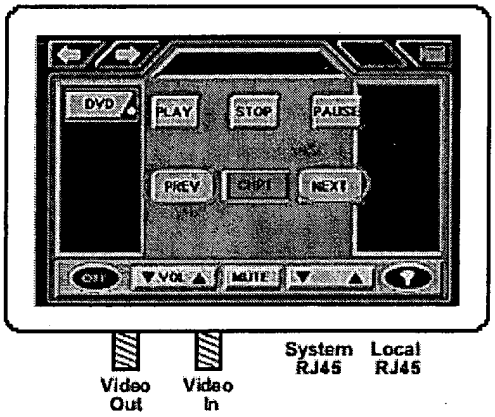
Example without the Overlay feature:

You are watching DVD video on the VIA!. You have access to Vol Up and Down and Channel Up and Down hidden buttons but you want to skip to the next chapter.

Overlay Screen

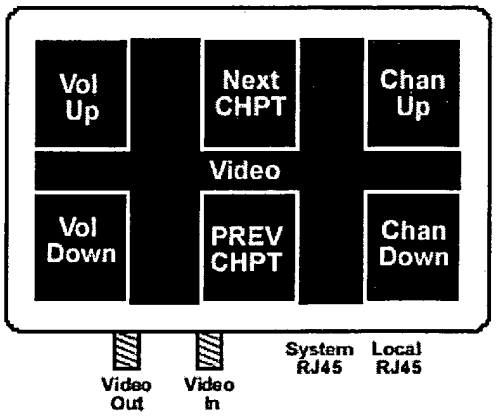


You must exit out of Video mode and select the Next Chapter or Previous Chapter function buttons.



Example with the Overlay feature:

You can program an Overlay page with Next Chapter or Previous Chapter hidden buttons.



Instead of exiting out of the video mode to change the chapter, simple press the Next Chapter or Previous Chapter hidden buttons.

Add a Blank Page.

- Click **ADD/REMOVE/SAVE**.
- Click **Add New Page**.
- Type in the **Page** name.
- Select the number of buttons to display initially and click **OK**.
- Select **Done**.
- The new **Page** has been added.

Add a Page from File.

- Click **ADD/REMOVE/SAVE**.
- Click **Add Page From a File**.
- Double click a name from the list and click **OK** or type in a name in the text box and click **OK**.
- Navigate to the page you want to add and select it.
- Click **Open**.
- Click **Done**.
- The **Page** has been added.

Save a Page to File.

- Click **ADD/REMOVE/SAVE**.
- Select the **Page** to be saved.
- Click **Save Page to a File**.
- Type the name the **Page** will be saved as.
- Click **Save**.
- Click **Done**.
- The **Page** has been saved.

Remove a Page.

- Click **ADD/REMOVE/SAVE**.
- Select the **Page** to be removed.
- Click **Remove Selected Page**.
- The **Page** has been removed.

Rename a Page.

- Click **ADD/REMOVE/SAVE**.
- Select the **Page** to be renamed.
- Click **Rename Page**.
- Double click a name from the list and click **OK** or type in a name in the text box and click **OK**.
- Click **Done**.
- The **Page** has been renamed.

Move a Button.

- Check **Enable Add, move and resize buttons** checkbox.
- Left click, press and hold the **button** to be moved.
- Move the **button** to the desired position.
- When the desired position is reached, release the left button.
- The **button** has been moved.

Resize a Button.

- Check **Enable Add, move and resize buttons** checkbox.
- Select the **button** to be resized.
- Place your cursor over one of the **small black squares**.
- The cursor changes to a two directional arrow.
- Left click, press and hold the **small black squares**.
- Move the **small black square** to the desired position.
- When the desired position is reached, release the left button.
- The **button** has been resized.

Add a Button.

- Check **Enable Add, move and resize buttons** checkbox.
- Click **Add a New Button**.
- Left click, press and hold the new **button** to be added.
- Move the **button** to the desired position.
- When the desired position is reached, release the left button.
- The **button** has been added.

Remove a Button.

- Select the **button** to be removed.
- Click **Remove**.
- The button has been removed.

Add IR Commands to a Button.

- Select the **button** to add IR commands.
- Select **IR** in the **Add Command to Button** section.
- Select the ⊞ symbol next to the **IR** manufacture.
- Select the manufacture's **Model**.
- Select the **IR** command from the **Commands** text box.
- Select the **System** checkbox if you only want to transmit the IR command out the VIA!'s System RJ45 connector.
- Select the **Local** checkbox if you only want to transmit the IR command out the VIA!'s Local RJ45 connector.
- Select both the **System** and **Local** checkboxes if you want to transmit the IR command out both the VIA!'s System and Local RJ45 connectors.
- Click **Add Command**.
- The **IR** command has been added to the button.

Add Serial Commands to a Button.

- Select the **button** to add Serial commands.
- Select **Serial** in the **Add Command to Button** section.
- Select the manufacture's **Model**.
- Select the **Serial** command.
- Click **Add Command**.
- The **Serial** command has been added to the button.

Add an Edit Sequence command to a Button.

- Select a **button** to assign an **Edit Sequence** command.
- Click **Edit Sequence** below the **Programmed Sequence** text box.
- Click the desired **Edit Sequence** command.
- The **Edit Sequence** command has been added to the **button**.

NOTE: Any button can have any number or combination of IR, Serial or Edit Sequence Commands.

Change the Delay time

- Double click the **Delay Command** from the list.
- A dialog box automatically displays.
- Select the **desired delay time**.
- Click **OK**.
- The **Delay Command** has been changed.

SetUp Screen

SetUp Screen

The above Icon represents the **SetUp Screen**.

The SetUp Screen enables VIA!TOOLS to Autobuild source buttons with ELAN default IR audio commands and Z880 commands. After Autobuilding, the source buttons are assigned both ELAN audio commands and Z880 commands.

When ELAN default IR audio commands are received by either the Z630 or MCU, the Z630 or MCU routes the associated audio to the zone.

Z880 commands are programmed on source buttons to route the appropriate video to the VIA! or television. The video is not displayed on the VIA! until the Video button is pressed. The Video button switches the VIA! from graphical mode with buttons to video mode. The names listed in the **Z880 Input** drop down box are collected from the **Z880 Screen's Source Name** drop down boxes.

The **SetUp Screen** consists of the following:

- **Assign ELAN default audio source IR commands to a source** button. See PG **74**.
- **Assign Z880 commands to a source button.** See PG **74**.

Assign ELAN default audio source IR commands to a source button.

- Select an **ELAN default audio source** command from the **HD Source** drop down menu (HD systems) or the **Z630 Source** drop down (Z systems).
- The **audio command** has been assigned.

Assign Z880 commands to a source button.

- Select a **Z880 Input** command from the **Z880 Input** drop down box.
- The **Z880 Input** has been assigned.

Autobuild Screen

Autobuild Screen

The above Icon represents the **Autobuild Screen**.

The Autobuild feature automatically assigns **ELAN default system commands** to specific VIA! **buttons**. This greatly reduces the programming time.

NOTE: If any **System Bar Buttons are Source Overridden** or the **TV button is Source Overridden** the buttons will not be Autobuild with ELAN default commands..

The **buttons** are:

- **Source buttons** See PG **75**.
- **OFF button** See PG **76**.
- **OFF-OFF button** See PG **76**.
- **Video button** See PG **76**.
- **Camera button** See PG **76**.
- **Volume buttons** See PG **77**.
- **Mute button** See PG **77**.
- **To Autobuild** See PG **77**.

You can Autobuild HD serial commands if you have a HD System type and have an SC4.

Source Buttons:

- Source Buttons are Autobuild with ELAN default IR commands and Z880 commands.
- Upon Autobuilding, VIA!TOOLS checks the **SetUp Screen's HD Source** drop down box or the **Z Source** drop down box for an audio source selection for each source button. If a source button has an associated **Audio Source** command programmed, VIA!TOOLS automatically assigns default **IR Audio Source** commands to the Source buttons. When the Source button is pressed the default **IR Audio Source** command is received by either a Z630 or MCU. The Z630 and MCU then routes the appropriate audio to the zone.
- Upon Autobuilding, VIA!TOOLS checks the **SetUp Screen's Z880 Input** drop down boxes for input assignment. If an assignment is present, VIA!TOOLS automatically assigns either an IR or Serial Z880 Output/Input command. The **SetUp Screen's Z880 Input** drop down box contains names that were programmed on the **Z880 Screen's Source Name** drop down boxes.

OFF Button:

- The Zone OFF button is Autobuild with an ELAN default **IR OFF** command that turns the **Zone off**.

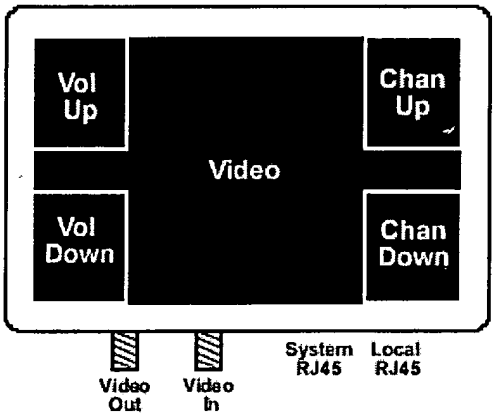
OFF-OFF Button:

- The System OFF button is Autobuild with an ELAN default **IR OFF** command that turns the **all Zones off** or the **System off**.

  NOTE: To access the System OFF button, double click the OFF button on the Program Screen. System OFF text is displayed beneath the OFF button.

Video Button:

- The Video Button is Autobuild with a **Video Switch** command that switches the VIA!'s screen from a graphical screen with buttons to video.
- When the Video button is pressed, you have access to **Volume Up**, **Volume Down**, **Channel Up** and **Channel Down** hidden buttons.
- The hidden buttons are invisible and superimposed on the VIA! screen when video is displaying.

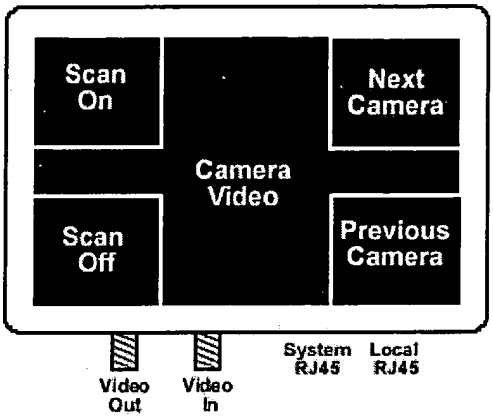


- The Video Button can also be programmed differently depending on what source button is selected by programming the TV button for **Source Override**.

Camera Button:

- The Camera Button is Autobuild with a **Switch to Camera Mode** command that notifies the VIA! to go to the **Camera Screen** and perform the **Initial Camera Sequence** button.
- When the Camera button is pressed, you have access to **Scan On**, **Scan Off**, **Next Camera** and **Previous Camera** hidden buttons.

- The hidden buttons are invisible and superimposed on the VIA! screen when video is displaying.



Volume Buttons:

- Volume Buttons are Autobuild with ELAN default IR **Volume Up** and **Down** commands to ramp the **Z630's** or **MCU's** volume up or down while pressing and holding the buttons.

Mute Button:

- The Mute Button is Autobuild with ELAN default IR **Mute** command to Mute the **Z630's** or **MCU's** volume.

To Autobuild:

- Select which buttons you want to Autobuild by checking or un-checking the appropriate checkboxes.
- If this is a **HD System** and you have a **SC4**, you can Autobuild buttons with ELAN serial commands by selecting **Serial** in the **What Type of HD commands to use?** section.
- Click **Autobuild**.
- **Autobuild** has been performed.

Router Screen

Router Screen

The above Icon represents the Router Screen.

The Router Screen allows you to program the following buttons with **IR**, **Serial** or **Edit Sequence Text Box Commands**:

- Source Buttons
- Video Button
- Camera Button
- Exit From Video Button
- Light Button
- Zone OFF Button

NOTE: Any button can have any number or combination of IR, Serial or Edit Sequence Commands.

Change the Delay time See PG **78**.

Program a Source, Video, Camera, Exit From Video, Light or OFF button with IR:

- Select a **button** to add IR commands.
- Select **IR** in the **Add Command to Button** section.
- Select the ⊞ symbol next to the manufacture.
- Select the manufacture's **Model**.
- Select the **IR** command from the **Commands** text box.
- Select the **System** checkbox if you only want to transmit the IR command out the VIA!'s System RJ45 connector.
- Select the **Local** checkbox if you only want to transmit the IR command out the VIA!'s Local RJ45 connector.
- Select both the **System** and **Local** checkboxes if you want to transmit the IR command out both the VIA!'s System and Local RJ45 connectors.
- Click **Add IR Command**.
- The **IR** command has been added to the button.

Program a Source, Video, Camera, Exit From Video, Light or OFF button with Serial Commands.

- Select the **button** to add IR commands.
- Select **Serial** in the **Add Command to Button** section.
- Select the manufacture's **Model**.
- Select the **Serial** command.
- Click **Add Serial Command**.
- The **Serial** command has been added to the button.

Add an Edit Sequence command to a Source, Video, Camera, Exit From Video, Light or OFF Button.

- Select a **button** to assign an **Edit Sequence** command.
- Click **Edit Sequence** below the **Programmed Sequence** text box.
- Click the desired **Edit Sequence** command.
- The **Edit Sequence** command has been added to the button.

Change the Delay time for a Source, Video, Camera, Exit From Video, Light or OFF button.

- Double click the **Delay Command** from the list.
- A dialog box automatically displays.
- Select the **desired delay time**.
- Click **OK**.
- The **Delay Command** has been changed.

Program Screen

Program Screen

The above Icon represents the **Program Screen**.

The **Program Screen** allows you to program the following buttons with **IR**, **Serial** or **Edit Sequence Text Box Commands**:

- Function Buttons
- System Bar Buttons
- Light Button
- Zone OFF Button
- System OFF Button

To select the System OFF button, double click the OFF button until "System Off" is displayed below the OFF button. When "System Off" is displayed, single click the OFF button to select it.

NOTE: Any button can have any number or combination of IR, Serial or Edit Sequence Commands.

Change the Delay time for a Function, System Bar, Light, Zone OFF or a System OFF button.
See PG **80**.

To program a Function, System Bar, Light, Zone OFF or a System OFF button with IR:

- Select a **button** to add IR commands.
- Select **IR** in the **Add Command to Button** section.
- Select the ⊞ symbol next to the manufacture.
- Select the manufacture's **Model**.
- Select the **IR** command from the **Commands** text box.
- Select the **System** checkbox if you only want to transmit the IR command out the VIA!'s System RJ45 connector.
- Select the **Local** checkbox if you only want to transmit the IR command out the VIA!'s Local RJ45 connector.
- Select both the **System** and **Local** checkboxes if you want to transmit the IR command out both the VIA!'s System and Local RJ45 connectors.
- Click **Add IR Command**.
- The **IR** command has been added to the button.

To program a Function, System Bar, Light, Zone OFF or a System OFF button with Serial Commands:

- Select the **button** to add IR commands.
- Select **Serial** in the **Add Command to Button** section.
- Select the manufacture's **Model**.
- Select the **Serial** command.
- Click **Add Serial Command**.
- The **Serial** command has been added to the button.

Add an Edit Sequence command to a Function, System Bar, Light, Zone OFF or a System OFF button.

- Select a **button** to assign an **Edit Sequence** command.
- Click **Edit Sequence** below the **Programmed Sequence** text box.
- Click the desired **Edit Sequence** command.
- The **Edit Sequence** command has been added to the button.

Change the Delay time for a Function, System Bar, Light, Zone OFF or a System OFF button.

- Double click the **Delay Command** from the list.
- A dialog box automatically displays.
- Select the **desired delay time**.
- Click **OK**.
- The **Delay Command** has been changed.

Camera Screen

Camera Screen

The above Icon represents the **Camera Screen**.

To display the Camera Screen See PG **83**.

To not display the Camera Screen See PG **83**.

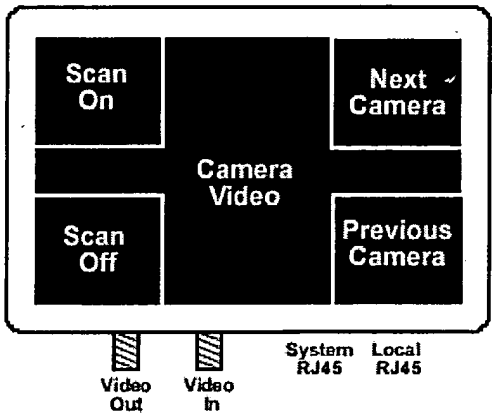
To remove commands from Camera Sequence buttons See PG **26**.

Change the Delay time See PG **84**.

The **Camera Screen** allows the VIA! panel to select **Next Camera**, **Previous Camera**, **Scan On** and **Scan Off** hidden buttons.

The **Camera Screen** allows you to program **Initial Camera Sequence** and **8 Camera Sequences** with **IR**, **Serial** or **Edit Sequence Text Box Commands**:

The hidden buttons are invisible and superimposed on the VIA! screen when camera video is displaying.



NOTE: Any button can have any number or combination of IR, Serial or Edit Sequence Commands. The commands do not have to be Z880 video switching commands; they can be any type of command.

- Whenever a VIA! that is programmed with a **Switch to Camera Mode** is pressed, the VIA! executes the programming on the **Initial Camera Sequence**.
- The VIA! is in Camera Mode and has access to Next Camera, Previous Camera, Scan On and Scan Off hidden buttons.

- Whenever the **Next Camera** hidden button is pressed, the VIA! checks **Camera Sequence 1**. If it is programmed, the VIA! executes it and waits for another instruction. If it is not programmed the VIA! checks **Camera Sequence 2**. If it is programmed, the VIA! executes it and waits for another instruction. If not, the VIA! checks all **Camera Sequences** until it finds one that has been programmed and executes it and waits for another instruction.
- Whenever the **Prev Camera** hidden button is pressed, the VIA! checks **Camera Sequence 8**. If it is programmed, the VIA! executes it and waits for another instruction. If it is not programmed the VIA! checks **Camera Sequence 7**. If it is programmed, the VIA! executes it and waits for another instruction. If not, the VIA! checks all **Camera Sequences** until it finds one that has been programmed and executes it and waits for another instruction.
- Whenever the **Scan On** hidden button is pressed, the VIA! checks for the first programmed button and executes it. The VIA! waits for the amount of time that is programmed in the **Time** checkboxes then looks for the next programmed button and executes it.

To display the Camera Screen

- Select the **System Screen**.
- Check the **Manual Camera Access** checkbox.
- The **Camera Screen** is displayed.

To not display the Camera Screen

- Select the System Screen.
- Uncheck the **Manual Camera Access** checkbox.
- The **Camera Screen** is displayed.

To program an Initial Camera Sequence button or one of the 8 Camera Sequences buttons with IR:

- Select a **button** to add IR commands.
- Select **IR** in the **Add Command to Button** section.
- Select the ⊞ symbol next to the manufacture.
- Select the manufacture's **Model**.
- Select the **IR** command from the **Commands** text box.
- Select the **System** checkbox if you only want to transmit the IR command out the VIA!'s System RJ45 connector.
- Select the **Local** checkbox if you only want to transmit the IR command out the VIA!'s Local RJ45 connector.
- Select both the **System** and **Local** checkboxes if you want to transmit the IR command out both the VIA!'s System and Local RJ45 connectors.

- Click **Add IR Command**.
- The **IR** command has been added to the button.

To program an Initial Camera Sequence button or one of the 8 Camera Sequences buttons with Serial Commands:

- Select the **button** to add IR commands.
- Select **Serial** in the **Add Command to Button** section.
- Select the manufacture's **Model**.
- Select the **Serial** command.
- Click **Add Serial Command**.
- The **Serial** command has been added to the button.

Add an Initial Camera Sequence button or one of the 8 Camera Sequences buttons with and Edit Sequence command:

- Select a **button** to assign an **Edit Sequence** command.
- Click **Edit Sequence** below the **Programmed Sequence** text box.
- Click the desired **Edit Sequence** command.
- The **Edit Sequence** command has been added to the button.

Change the Delay time for an Initial Camera Sequence button or one of the 8 Camera Sequences buttons :

- Double click the **Delay Command** from the list.
- A dialog box automatically displays.
- Select the **desired delay time**.
- Click **OK**.
- The **Delay Command** has been changed.

Trigger Screen

Trigger Screen

The above Icon represents the **Trigger Screen**.

Depending on the **System Type** selected on the **System Screen**, the **Trigger Screen** will display different options.

The **Trigger Screen** allows you to program System Triggers and Local Triggers with **IR**, **Serial** or **Edit Sequence Text Box Commands**.

Change the Delay time See PG **87**.

With the **VIA! Port/Z600 Triggers** checkbox checked, you have the following options:

- **Local Port On** and **Local Port Off**

  Whenever **Pin 1** on the **Local RJ45** connector is shorted to ground, **Local Port On** is executed.

  Whenever **Pin 1** on the **Local RJ45** connector is not shorted to ground, **Local Port Off** is executed.

- **System Port On** and **System Port Off**

  Whenever **Pin 1** on the **System RJ45** connector is shorted to ground, **System Port On** is executed.

  Whenever **Pin 1** on the **System RJ45** connector is not shorted to ground, **System Port Off** is executed.

- **Z600 Page/DB On** and **Z600 Page/DB Off**

  Whenever the **Z600** detects a doorbell, it notifies the **Z630**. The **Z630** in-turn notifies the **VIA!**. Whenever the **VIA!** receives the message, **Z600 Page/DB On** is executed.

  When the doorbell ends, the **Z600** notifies the **Z630**. The **Z630** in-turn notifies the **VIA!**. Whenever the **VIA!** receives the message, **Z600 Page/DB Off** is executed.

  NOTE: If one of the above options is not displayed, select a different **System Type** on the **System Screen**.

With the **Local SR1 Triggers** checkbox checked, you have **8 On** and **8 Off** triggers that can be programmed.

- Local SR1s are connected with a RJ45 to RJ45 connector from the **SR1s VIA! Local Port** RJ45 connector to the **VIA!'s Local** RJ45 connector.

- Whenever the SR1 detects a short on one of it's 8 sense ports, the corresponding VIA! trigger executes.

  NOTE: Any trigger can have any number or combination of IR, Serial or Edit Sequence Commands.

To program a System Trigger and Local Trigger with IR:

- Select a **Trigger** to add IR commands.
- Select **IR** in the **Add Command to Button** section.
- Select the ⊞ symbol next to the manufacture.
- Select the manufacture's **Model**.
- Select the **IR** command from the **Commands** text box.
- Select the **System** checkbox if you only want to transmit the IR command out the VIA!'s System RJ45 connector.
- Select the **Local** checkbox if you only want to transmit the IR command out the VIA!'s Local RJ45 connector.
- Select both the **System** and **Local** checkboxes if you want to transmit the IR command out both the VIA!'s System and Local RJ45 connectors.
- Click **Add IR Command**.
- The **IR** command has been added to the **Trigger**.

To program a System Trigger and Local Trigger with Serial Commands:

- Select the **Trigger** to add IR commands.
- Select **Serial** in the **Add Command to Button** section.
- Select the manufacture's **Model**.
- Select the **Serial** command.
- Click **Add Serial Command**.
- The **Serial** command has been added to the **Trigger**.

Add a System Trigger and Local Trigger button with an Edit Sequence command:

- Select a **Trigger** to assign an **Edit Sequence** command.
- Click **Edit Sequence** below the **Programmed Sequence** text box.
- Click the desired **Edit Sequence** command.
- The **Edit Sequence** command has been added to the **Trigger**.

Change the Delay time for a System Trigger and Local Trigger:

- Double click the **Delay Command** from the list.
- A dialog box automatically displays.
- Select the **desired delay time**.
- Click **OK**.
- The **Delay Command** has been changed.

Miscellaneous Screen

Miscellaneous Screen

The above Icon represents the **Miscellaneous Screen**.

The **Miscellaneous** Screen provides the following:

- Advises the programmer how much VIA! resources have been used.
- Provides a means to Timeout the VIA!.

  Timing Out a VIA! makes the VIA! turn black.

  The VIA!'s LCD screen has an approximate life expectancy of **ten thousand** hours. Having built-in "time outs" extends the life of the VIA!

  You can program Timeouts for **Source**, **Off**, **Light**, **Video** and **Camera** buttons.

  After one of the above buttons has been pressed, an internal timer starts counting. If the timer reaches the programmed **Timeout**, the VIA! turns black or **Times Out**.

- Indicates what **Unit ID** will be downloaded to the VIA!.

  Unit IDs are used to allow the SC4 to identify which VIA! it is communicating with.

Transfer Screen

Transfer Screen

The above Icon represents the **Transfer Screen**.

The **Transfer Screen** performs the following:

- **Autobuilds** prior to download.
- Downloads all programming to the VIA! panel.

NOTE: Unless you are very familiar with VIA!TOOLS, leave **Autobuild Before Download** checked.

To download to the VIA!:

- Connect the authoring computer to the Learner using a DB9 to DB9 cable.
- Connect the **Learner** to the **VIA!** by using the **gray download cable**.
- Ensure power is applied to the Learner.
- Click **Start**.

NOTE: See Initial VIA!TOOLS s and Computer SetUp if VIA!TOOLS can not find the comm port.

Simulate Screen

Simulate Screen

The above Icon represents the **Simulate Screen**.

The **Simulate Screen** enables the installer to test IR commands and programmed sequences from within VIA!TOOLS without having to download.

NOTE: The Simulate Screen can only test IR sequences and not serial sequences.

To test sequences:

- Attach the authoring computer to the Learner.
- Point the Learner's **Test IR** LEDs towards the source equipment no further than 12 feet away.
- Click **Connect Learner**.
- Press **buttons** on the VIA!.
- IR commands are transmitted out the back of the Learner's **Test IR** LEDs to control the source equipment.

ZPAD Layout Screen

ZPAD Layout Screen

The above Icon represents the **ZPAD Layout Screen**.

The Layout Screen allows you to:

- **Import Source Pages** See PG **91**.

  Importing **Source Pages** from file is a programmed source button that was saved to the authoring computer with or without buttons programmed with IR.

- **Export Source Pages** See PG **91**.

  Exporting **Source Pages** allow you to quickly reuse all programming without having to manually recreate the page every time it is needed. **Source Pages** can be saved with or without IR commands to the authoring computer.

- **Name Source Pages** See PG **91**.

  Naming Source Pages lets the programmer keep track of the sources name within VIA!TOOLS. It is a naming convention only and is not downloaded to the ZPAD.

Import Source Pages

- Click **Import Arrow** next to the source to be imported.
- Navigate to the **file** you want to import and select it.
- Click **Open**.
- The **Source Button** has been imported.

Export Source Pages

- Click **Export Arrow** next to the source to be exported.
- Navigate to the **file** you want to export and select it.
- Click **Save**.
- The **Source Button** has been exported.

Name Source Pages

- Type in a **name** in the Source Page Name text box.

ZPAD SetUp Screen

ZPAD SetUp Screen

The above Icon represents the **ZPAD SetUp Screen**.

The SetUp Screen enables VIA!TOOLS to Autobuild source buttons with Z880 commands. After Autobuilding, the source buttons are assigned Z880 commands.

Z880 commands are programmed on source buttons to route the appropriate video to a television. The names listed in the **Z880 Input** drop down box are collected from the **Z880 Screen's Source Name** drop down boxes.

Assign Z880 commands to a source button.

- Select an **Z880 Input** command from the **Z880 Input** drop down box.
- The **Z880 Input** has been assigned.

ZPAD Autobuild Screen

ZPAD Autobuild Screen

The above Icon represents the ZPAD Autobuild Screen.

The Autobuild feature automatically inserts **Z880 commands** under the **source buttons**. This greatly reduces programming time.

Source Buttons:

- Upon Autobuilding, VIA!TOOLS checks the **SetUp Screen's Z880 Input/Output** drop down boxes for assignment. VIA!TOOLS also checks to see if the Z880 Screen's Output has **Monitor** checked. If an assignment is present and Monitor is checked, VIA!TOOLS automatically assigns an IR Z880 Output/Input commands to the Source key. The **SetUp Screen's Z880 Input** drop down box contains names that were programmed on the **Z880 Screen's Source Name** drop down boxes.

ZPAD IR Screen

ZPAD IR Screen

The above Icon represents the **ZPAD IR Screen**.

The **IR Screen** allows you to:

- **Assign an IR commands to a key** See PG **97**.
- **Delete an IR commands from a key** See PG **97**.

Available Sources to be programmed:

- In a **Stand Alone** system, there are **12 sources** and a **TV source** that can be programmed.
- In a **HD** system, 12 sources are displayed but the MCU only responds to the first **10 sources** and the **TV source**.
- In a **Z** system, 12 sources are displayed but the Z630 only responds to the first **6 sources** and the **TV source**.
- Each source has a group of keys assigned to it.

The **TNR** source has **Vol Up**, **Vol Down**, **Play**, etc...keys to be programmed.

The **CD** source has **Vol Up**, **Vol Down**, **Play**, etc...keys to be programmed that are different from the **TNR** source keys.

Source Sequence

- ZPAD sequences can contain a max of 13 command pointers.
- **Source** keys Sequences are specific to the selected source.
- **Source** keys Sequences consist of the **Source** key and the **FAV** key.
- Each **source** key can be programmed with a sequence. When the **source** key is pressed, up to 13 command pointers can be executed.
- The **TNR** source button can be programmed with a different sequence than the **CD** source button.
- Once a source button is selected, the **FAV** key can be programmed with a source sequence. With **TNR** selected, the **FAV** key sequence can be programmed differently than the **CD's FAV** key sequences.
- Sequence buttons can also be programmed with a single IR command.

Global Sequences

- ZPAD sequences can contain a max of 13 command pointers.
- Global sequences do not care what source button is selected. They will perform the same sequence no matter what source is selected. Global Sequences are: **FAV**, **Party**, **Shift 7**, **Shift 8**, **Shift 9**, **Shift FAV** and **Shift Party**.

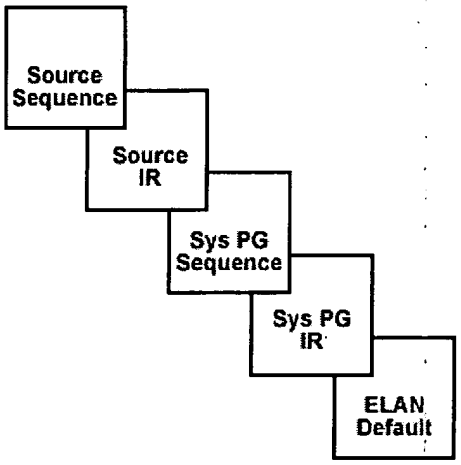
IR Key Hierarchy:

- The following table illustrates keys for the different pages.

	Source Page Source Sequences	Source Page IR	System Page Global Sequences	Sys Page IR
1	Source	Source		
2		Volume Up		Volume Up
3		Volume Down		Volume Down
4		Play		Play
5		Stop		Stop
6		CNTRL+ or >>| (Z200/250)		CNTRL +
7		CNTRL - or |<< (Z200/250)		CNTRL -
8	FAV	FAV	FAV	FAV
9		Disc		Disc
10		Mute		Mute
11		Power		Power
12		1		1
13		2		2
14		3		3
15		4		4
16		5		5
17		6		6
18		7		7
19		8		8
20		9		9
21		0		0
22		Enter		Enter
23		Recall		Recall
24		AM/FM or +10 (Z200/250)		AM/FM
25			Party	Party
26		Shift Vol Up		Shift Vol Up
27		Shift Vol Down		Shift Vol Down
28		Shift Play		Shift Play
29		Shift Stop		Shift Stop

30		Shift CNTRL +		Shift CNTRL +
31		Shift CNTRL -		Shift CNTRL -
32			Shift FAV	Shift FAV
33		Shift Disc		Shift Disc
34		Shift Mute		Shift Mute
35		Shift Power		Shift Power
36		Shift 1		Shift 1
37		Shift 2		Shift 2
38		Shift 3		Shift 3
39		Shift 4		Shift 4
40		Shift 5		Shift 5
41		Shift 6		Shift 6
42			Shift 7	Shift 7
43			Shift 8	Shift 8
44			Shift 9	Shift 9
45		Shift 0		Shift 0
46		Shift Enter		Shift Enter
47		Shift Recall		Shift Recall
48		Shift FM/AM		Shift FM/AM
49			Shift Party	Shift Party

- Notice that some keys are duplicated from one page to another.
- Upon download, VIA!TOOLS checks to see which keys are programmed. If the same key is programmed on multiple pages, VIA!TOOLS downloads according to a hierarchy: Source Sequence, Source IR, System Page Sequence, System Page IR and ELAN Default.



If the key is programmed on the **Source Sequence Page**, the ZPAD executes the command and quits.

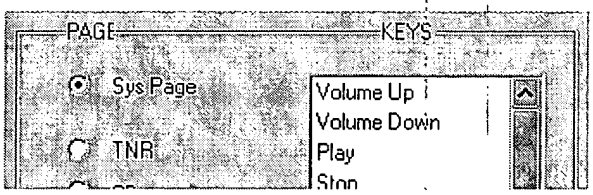
If the Key is on the **Source IR Page** only, the ZPAD skips the **Source Sequ nce page** and executes the Source IR command and quits.

If the Key is on the **Sys PG Sequence** only, the ZPAD skips the **Source Sequence page** and the **Source IR Page** and then executes the **Sys PG Sequence** command and quits.

If the Key is programmed on the **Sys PG IR** only, VIA!TOOLS skips the **Source Sequence page**, **Source IR Page** and the **Sys PG Sequence** and then executes the **Sys PG IR** command and quits.

If none of the pages are programmed, VIA!TOOLS executes the ELAN Default command.

- From the IR Screen, Keys programmed on the Sys Page can only be programmed with a single IR command but they are accessible no matter what source is selected.



If the FAV key is only programmed on the Sys Page, the FAV key will perform the same IR command no matter what source is selected.

If the FAV key is programmed on the CD page and the Sys page, the FAV key will perform the same IR command for all sources except the CD page. The CD FAV key will perform what was programmed on it.

To assign an IR command to a key:

- Select a **Page**.
- Select a **Key** to be programmed.
- Select the ⊞ symbol next to the **IR** manufacture in the **Remote File** text box.
- Select the manufacture's **Model**.
- Select the **IR** command from the **IR Commands** text box.
- Click **Add IR Command**.
- The **IR** command has been added to the key.

To remove an IR command from a key:

- Select **Page**.
- Select the **Key** to delete.
- Click **Remove IR Command**.
- The **IR** command has been removed.

ZPAD Sequence Screen

ZPAD Sequence Screen

The above Icon represents the **ZPAD Sequence Screen**.

The **Sequence Screen** allows you to:

- **Create a Sequence on a key** See PG **99**.
- **Remove a Sequence step from a key** See PG **100.**
- **Move a step up or down in the sequence:** See PG **100**.
- **Change the Length of the IR command** See PG **101**.
- **Change the Gap (delay time) after the selected IR command** See PG **101**.

ZPADs can only store one IR command to a key. Sequence keys can point up to 13 keys where IR commands are stored. Sequence keys do not store IR data but stores pointers to other programmed keys. Because of this, you must program IR to keys on the **IR Screen** prior to programming a sequence.

Source Sequence

- ZPAD sequences can contain a maximum of 13 command pointers.
- **Source** sequences are specific to the selected source.
- **Source** sequences are initiated by pressing the **Source** key and/or the **FAV** key.
- Each **source** key can be programmed with a sequence. When the **source** key is pressed, up to 13 command pointers can be issued.

  The **TNR** source key can be programmed with a different sequence than the **CD** source key.

  Once a source key is selected, the **FAV** key can be programmed with a source sequence. With **TNR** selected, the **FAV** key can be programmed with a different sequence than the **CD's FAV** key's sequence.

- Sequence buttons can also be programmed with a single IR command.

Global Sequences

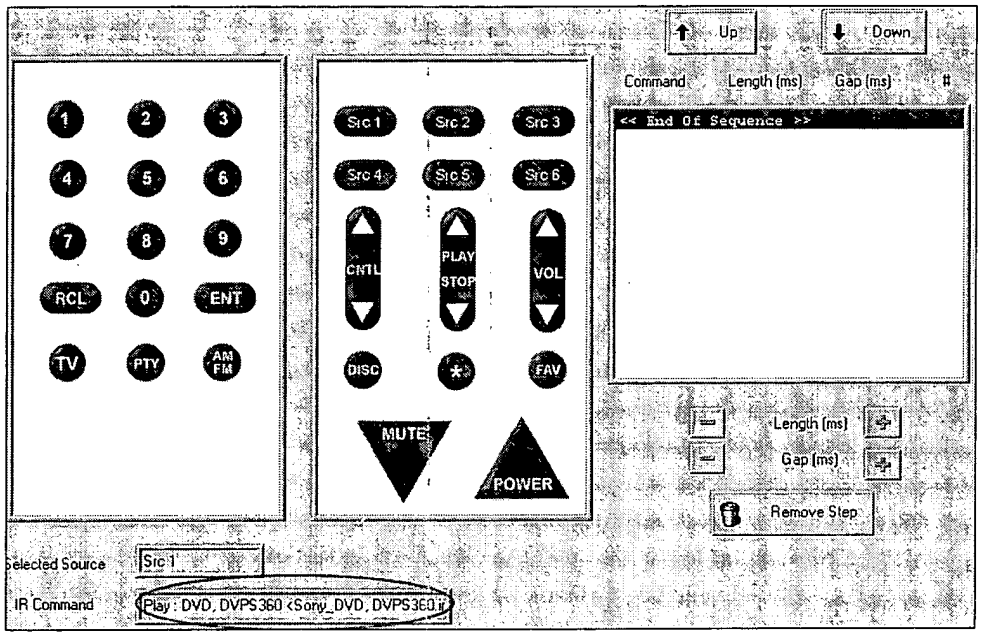
- ZPAD sequences can contain a maximum of 13 command pointers.
- Global sequences do not care what source button is selected. They will perform the same sequence no matter what source is selected. Global Sequences are: **FAV**, **Party**, **Shift 7**, **Shift 8**, **Shift 9**, **Shift FAV** and **Shift Party**.

ZPAD Sequence Screen

Create a Sequence on a key:

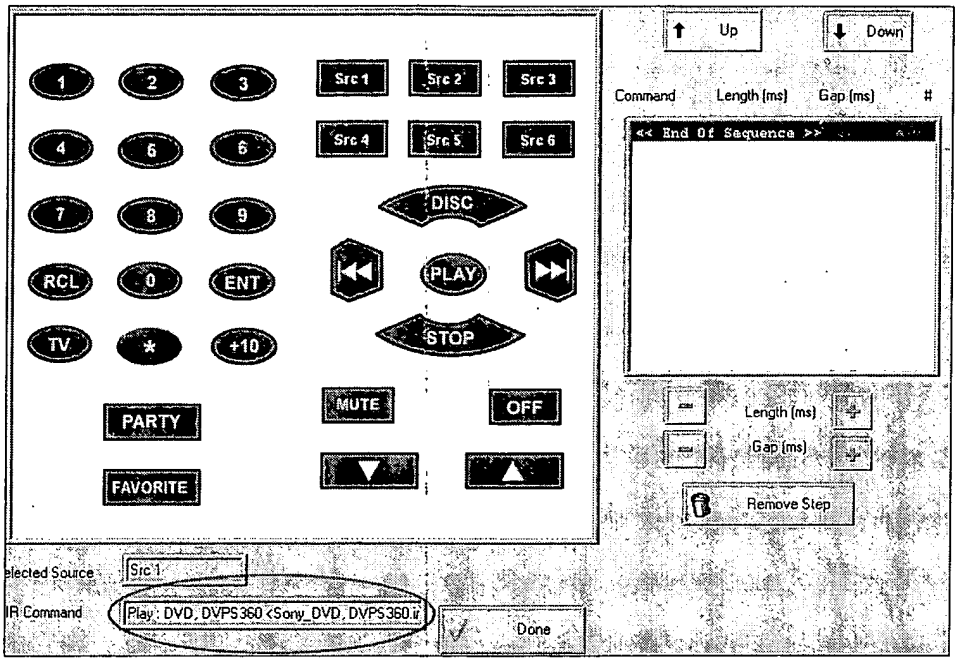
- Select **Page**.
- Select the **Key** to be programmed.
- Click **Edit Sequence**.
- A ZPAD illustration displays.
- Press the ZPAD buttons until the sequence step is complete.

Z100



ZPAD Sequence Screen

Z200



NOTE: The **IR command** programmed to the **ZPAD** key is displayed in the **IR Command** text box.

To Remove a Sequence step from a key:

- Select **Page**.
- Select the **Key** to be programmed.
- Click **Edit Sequence**.
- Select the **sequence** command to remove.
- Click **Remove Step**.
- The **step** has been removed.

Move a step up or down in the sequence:

- Select **Page**.
- Select the programmed **Key**.
- Click **Edit Sequence**.
- Select the **sequence** command to be moved.
- Click **Up** or **Down**.
- The command has been moved.

Change the Length of the IR command:

- Select **Page**.
- Select the programmed **Key**.
- Click **Edit Sequence**.
- Select the **sequence** command to change the length.
- Click **Plus** or **Minus**.
- The length has been changed.

  NOTE: Length is the amount of time the IR command will be transmitted.

Change the Gap (delay time) after the selected IR command:

- Select **Page**.
- Select the programmed **Key**.
- Click Edit Sequence.
- Select the **sequence** command to change the gap after the selected command.
- Click **Plus** or **Minus**.
- The gap has been changed.

  NOTE: Gap is the delay time between IR commands.

ZPAD Transfer Screen

ZPAD Transfer Screen

The above Icon represents the **Transfer Screen**.

The **Transfer Screen** performs the following:

- Downloads all programming to the ZPAD.
- **Autobuilds** prior to download.

  NOTE: Unless you are very familiar with VIA!TOOLS, leave **Autobuild Before Download** checked.

To download to the ZPAD:

- Connect the authoring computer to the Learner using a DB9 to DB9 cable.
- Connect the **Learner** to the **ZPAD** using the provided **gray download cable**.
- Ensure power is applied to the Learner.
- Click **Start Download**.

Application 1

Application 1

Application 1 systematically builds a 2 zone Z system that includes both VIA!s and ZPADs. This section provides a solid foundation of basic VIA!TOOLS concepts.

The following features are in Application 1:

Application 1

A Dealer has been hired to install a system into a customer's home. The home consists of two floors and a Garage.

1st floor:	2nd floor
Family Room	Master Bedroom
Dining Room	Master Bath
Living Room	1st Bedroom
Kitchen	2nd Bedroom
Full Bath	Office
	Full Bath

The installer and the homeowners have decided their zones will be:

First floor	**VIA!** Panel located in the Kitchen.
Second floor	**VIA!** Panel located in the Master Bedroom.
Garage	**ZPAD**

Application 1

The following source equipment is in the home:

Sony CD Player	RM-P2000	System Component
Kenwood RCVR	VR-5900	System Component
Sony DVD Player	RMT-D116A	System Component
RCA TV	E13320	Local source located in the Kitchen

A **Z** System with one **Z630** will accomplish this. Future expansion can be accomplished if all rooms are pre-wired appropriately.

The homeowner also wants audio/video communications with the front door. A **Z600** and **Z880** is required for audio/video communication to the front door.

Open VIA!TOOLS and create a new project

- From the Project Menu select **New**.
- Type in the **Clients Name** for the project name and click **OK**.

Type the **Clients Address** in the **Address** text box.

Programming the System Screen

Selecting a System Type

A Z630 System has been chosen for the installation; the System Type needs to selected.

- **To select a System Type** See PG **33**.

Adding Zones

A Zone needs to be added for the 1st floor (zone 1), 2nd floor (zone 2) and the Garage (zone 3):

- **To Add a zone for the 1st Floor, 2nd Floor and Garage** See PG **33**.

Renaming Zones

Rename Zone 1 to 1st Floor, Zone 2 to 2nd Floor and Zone 3 to Garage:

Renaming zones gives the programmer a better understanding where the zone is located in the house.

Keep in mind the first zone line in the **Zones Available in Project** text box is Zone 1.

When a program is downloaded to a VIA!, the VIA! gets assigned an electronic zone identifier. Zone identifiers are different from Unit IDs. (Unit IDs are used by a SC4 and will be discussed later.) Zone identifiers tell the VIA! to respond to the correct system level commands from the Z630, S6 or MCU. If a VIA! is wired for Zone 1 but the zone identifier is Zone 2, the VIA! will not respond correctly.

- **To Rename the Zones to 1st Floor, 2nd Floor and Garage** See PG **34**.

Adding Panels

Panels need to be created for each zone.

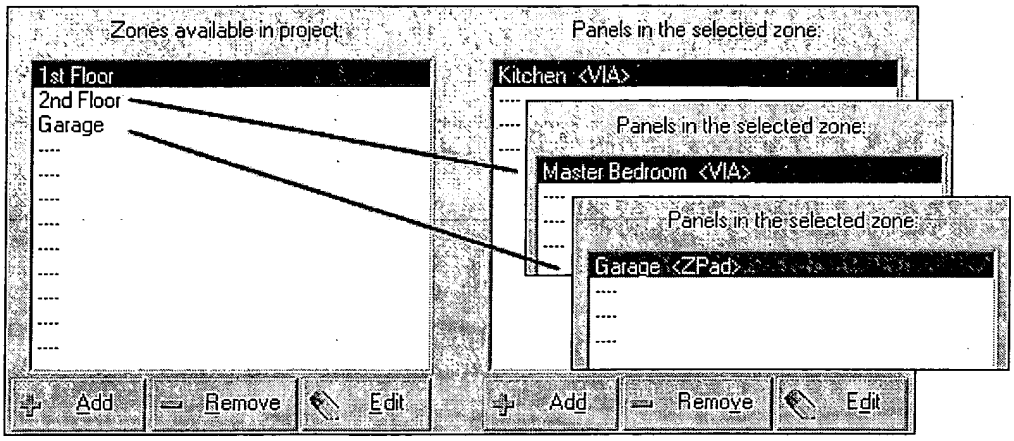
Panels will allow the homeowner to select and control their sources from the VIA!s and ZPADs. The 1st Floor and 2nd Floor zones will have a VIA!. The Garage zone will have a ZPAD.

- **To add a blank VIA! panel for the 1st Floor and 2nd Floor VIA!s** See PG **34**.
- **To add a blank ZPAD for the Garage** See PG **34**.

Rename Panels

The homeowner would like the 1st Floor VIA! to be located in the Kitchen, the 2nd Floor VIA! to be located in the Master Bedroom and the ZPAD located in the Garage. Rename the panels appropriately.

- **To Rename the panels in the Zones** See PG **35**.



Up to this point, the project looks like the above illustration.

Z-880

Since the homeowner wants to have Front Door Camera video displayed on their VIAs and their RCA television, the Z880 Screen needs to be programmed.

The Z880 Screen aids VIA!TOOLS in Autobuilding **Source** buttons, **Exit from Video Button** and the **Camera Screen** with **Z880 IR** commands.

To Program the Z880 Screen See PG **39**.

Programming on the Z880 Screen applies to all Panels in the project.

- Physically run the video wire from the front camera to **Input 1** on the Z880.
- Select the **Camera** checkbox for **Input 1**.

  This notifies VIA!TOOLS to Autobuild the **Camera Screen** with this input as a camera.
- Select **Input 1** drop down box and type in **Front**.
- Select **DVD** for **Input 2** dropdown box.

  This will allow the DVD's video to be accessed on the VIA! and the television.
- Select **1st Floor** in **Output 1's** dropdown box.

  This notifies VIA!TOOLS to Autobuild **Source buttons**, **Exit from Video Button** and the **Camera Screen** with Output 1 Z880 IR commands for all panels in 1st Floor zone.

  1st Floor VIA!, Output 1, will be able to view any of the Z880's inputs.

  This output needs to be physically run to the VIA! on the 1st Floor.

- Select the **VIA!** checkbox for **Output 1**.
- This notifies VIA!TOOLS that **Output 1** is routed to the 1st Floor VIA!.
- Select **1st Floor** in **Output 2's** dropdown box.

  This notifies VIA!TOOLS to Autobuild **Source buttons** and the **Exit from Video Button** with Output 2 Z880 IR commands for all panels in 1ST Floor zone.

  1st Floor RCA television, Output 2, will be able to view any of the Z880's inputs.

  This output needs to be physically run to the RCA television on the 1st Floor.

- Select the **Monitor** checkbox for **Output 2**.

  This notifies VIA!TOOLS that **Output 2** is routed to the 1st Floor RCA television.

  NOTE: Programming one output for the VIA! and one output for the television, allows the homeowner to view different video on the television and the VIA!.

- Select **2nd Floor** in **Output 3's** dropdown box.

  This notifies VIA!TOOLS to Autobuild **Source buttons**, **Exit from Video Button** and the **Camera Screen** with Output 3 Z880 IR commands for all panels in 2ND Floor zone.

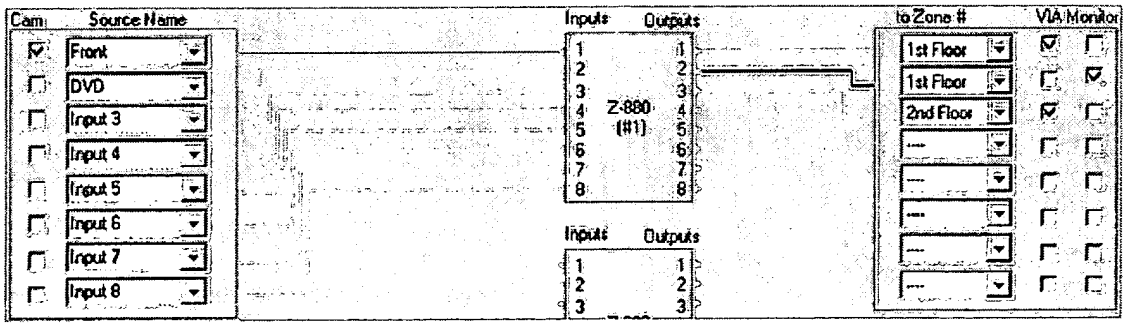
  2ND Floor VIA!, Output 3, will be able to view any of the Z880's inputs.

  This output needs to be physically run to the VIA! on the 2ND Floor.

- Select the **VIA!** checkbox for **Output 3**.

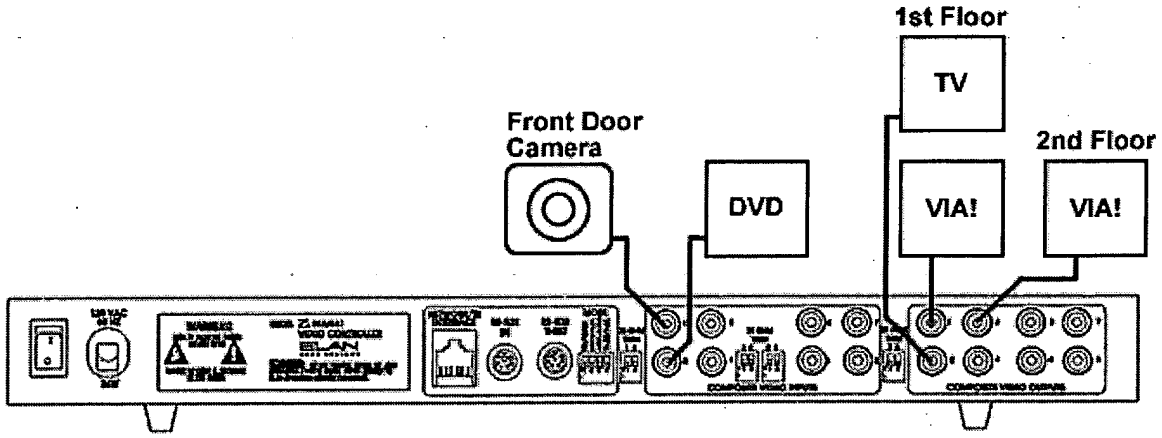
  This notifies VIA!TOOLS that **Output 3** is routed to the **2nd Floor VIA!**.

  NOTE: Since there is not a television in the 2nd Floor zone, Output 4 is not programmed for a Monitor.



Up to this point, the Z880 Screen looks like the above illustration.

- Since the Camera video is wired to Input 1 and the DVD video to Input 2, you must physically wire the Z880 with Camera to Input 1 and DVD to Input 2. Since Output 1 is programmed to the 1st Floor VIA!, Output 2 to the 1st Floor Television and Output 3 to the 2nd Floor VIA!, you must wire the Z880 this way.



Selecting a panel

To start programming a panel, select the Kitchen panel in the 1st Floor zone.

Selecting a panel displays the VIA! **Toolbar Screen Icons**.

- Select **1st Floor** zone in the **Zones Available in Project** text box.
- Select **Kitchen** panel in the **Panels in the Selected Zone** text box.

Programming the Motif Screen

Select a Motif

Selecting a Motif gives the VIA! panel an overall look and feel. There are 77 different Motifs to choose.

- **To Select a Motif** See PG **45**.

Add Motif Independent buttons

It is best to add all Independent buttons to the button bucket rather than adding only the buttons you will use in this panel.

- **To add all Motif Independent Buttons** See PG **46**.

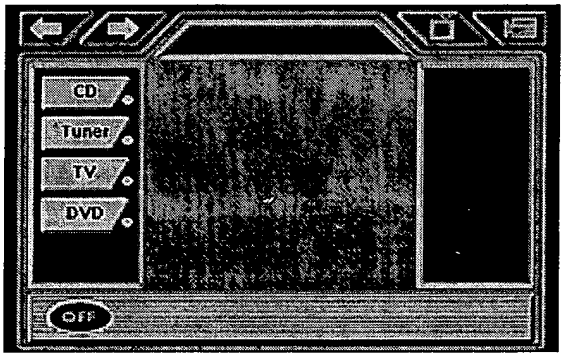
The **Layout Screen** is where you begin to design the functional part of your panel; **Source Buttons**, **Function pages** and **Function Buttons** are placed and aligned on the VIA! panel.

Since the homeowner has a CD player, a Television, DVD and a receiver, source buttons need to be created to control these devices.

Program the Layout Screen

Add Source Buttons

- **To add a blank source for CD, Tuner, TV and DVD** See PG **54**.



Each source button now needs to be programmed with function buttons that will control the source.

Add function buttons for the CD source

Select the CD source button and add Play, Stop, Pause, Rewind, Fast Forward, Track Up and Track Down function buttons:

- **To add function buttons for the CD source** See PG **61**.

Align function buttons for the CD source

Align the buttons by one or all of the following methods:

- **To align the CD's function buttons using Random guidelines** See PG **63**.
- **To align the CD's function buttons using Fixed guidelines** See PG **64**.
- **To align the CD's function buttons using your mouse** See PG **62**.
- **To align the CD's function buttons using precision arrows.** See PG **63**.

System Bar Buttons for the CD source

Now is a good time to give the CD's System Bar Buttons attention.

- Volume Buttons

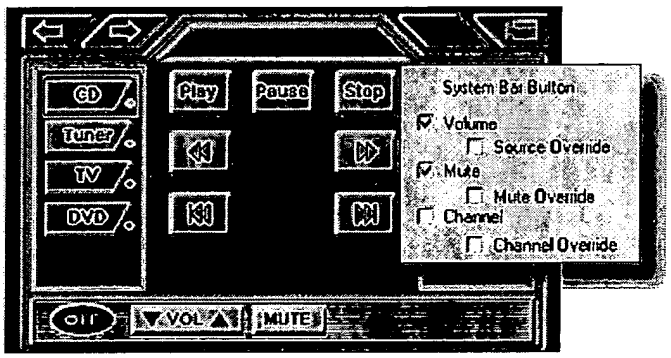
  Z630 will actually control the volume for the zone. To do this, the Z630 needs to receive ELAN default Volume IR commands from the VIA!. With the Volume's Source Override **unchecked**, VIA!TOOLS will Autobuild the ELAN default Volume IR commands to the Volume Up and Down buttons.

- Mute Button

  The Z630 will actually mute the zone's volume. To do this, the Z630 needs to receive ELAN default Mute IR command from the VIA!. With the Mute's Mute Override **unchecked**, VIA!TOOLS will Autobuild the ELAN default Mute IR commands to the Mute button.

- Channel Up and Down Buttons

The Channel Up and Down buttons are not being used for CD so uncheck the Channel checkbox. The Channel Up and Down buttons will be removed whenever the CD button is selected.



Add function buttons to the Tuner source

Select the Tuner source button and add station #'s or call letters, whichever the homeowner is more familiar with:

- **To add function buttons to the Tuner source** See PG **61**.

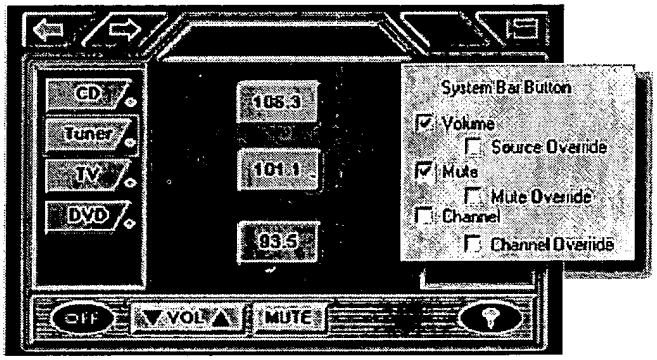
Align function buttons for the Tuner source

Align the buttons by one or all of the following methods:

- **To align the Tuner's function buttons using Random guidelines** See PG **63**.
- **To align the Tuner's function buttons using Fixed guidelines** See PG **64**.
- **To align the Tuner's function buttons using your mouse** See PG **62**.
- **To align the Tuner's function buttons using precision arrows.** See PG **63**.

System Bar Buttons for the Tuner source

The Tuners System Bar Buttons are Identical to the CD's System Bar Buttons.



Add function buttons for the TV source

Select the TV source button and add Independent Motif ABC, CBS and NBC function buttons:

This will give a visual button for the homeowner's favorite stations.

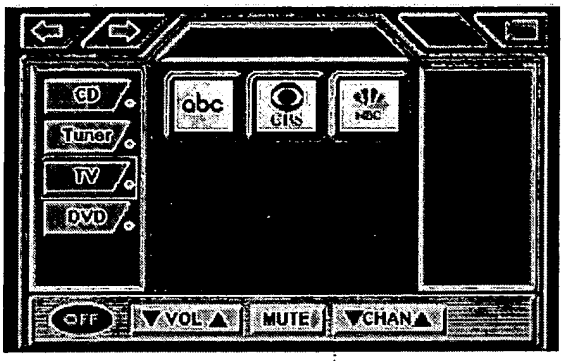
Only add their favorite stations. Adding every conceivable Independent button will cause VIA!TOOLS to run out of memory.

- **To add function buttons to the TV source** See PG **61**.

Align function buttons for the TV source

Align the buttons by using fixed **Preset** guidelines.

- **To align the TV's function buttons using Preset Fixed guidelines** See PG **64**.



Add a Function Page From File for the TV source

Select the TV source button and add a direct access keypad from file:

This will provide them access to stations that are not the homeowner favorite stations and in-turn save memory. Name the function page Direct.

- **To add a TV function page from file** See PG **58**.

Select V2.1 TV Direct.VFT function page from file.

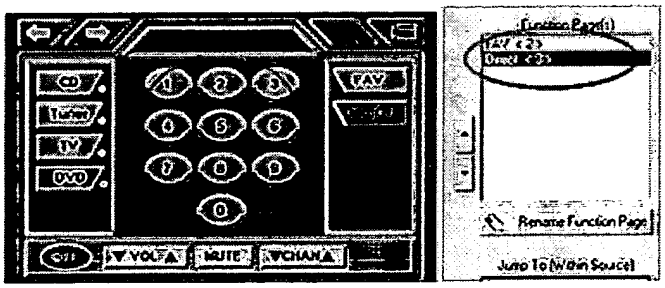
Rename a Function Page for the TV source

Rename the TV's function pages to reflect the content on both pages. Since the **Top Page** consists of the customer's favorite stations, ABC, NBC and CBS, rename Top Page to FAV.

- **To Rename the TV's Top Page function page to FAV** See PG **59**.

Since **RCL** and **ENT** on the Direct function page are not required to operate this particular television remove them.

- **To remove RCL and ENT from the Direct function page** See PG **62**.



Add Function Page Jump To buttons for the TV source button

Function page **Jump To** buttons will need to be added to both the FAV and Direct function page.

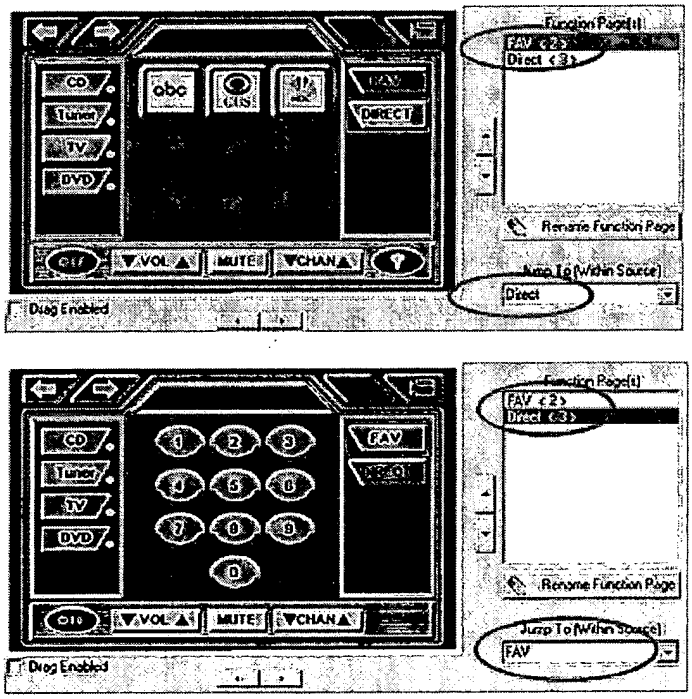
- **To add function page Jump To buttons to both the FAV and Direct function pages** See PG **61**.

Add Jump To commands to the Jump To Buttons for the TV source button

Function Page jumps need to be added to the FAV function button on the Direct function page and the Direct function button on the FAV function page.

This will allow the user to easily navigate between the function pages.

- **Add Function Page Jump To commands to the TV source Function Pages** See PG **66**.



Align Function Page Jump To buttons for the TV source button

Align the function page Jump To buttons by using fixed **Page Selector** guidelines.

- **To align the TV's function page Jump To buttons using Page Selector guidelines** See PG **64**.

System Bar Buttons for the TV source button

The TV's System Bar Buttons are a little different from the Tuner and CD.

- Volume Buttons:

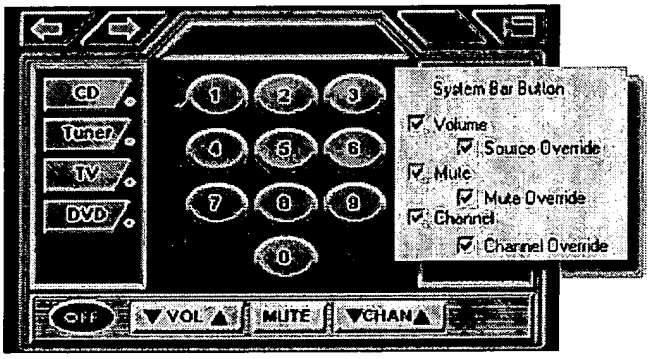
  This source will not be connected to the Z630 since it is a local television located in the Kitchen. Since the TV's volume will not be attenuated in the Z630, the Volume Source Override checkbox needs to be **checked**. With this checked, VIA!TOOLS will not Autobuild ELAN default IR Volume commands but it will allow you to program the Volume buttons with the TV's volume commands.

- Mute Button:

  This source will not be connected to the Z630 since it is a local television located in the Kitchen. Since the TV's volume will not be muted in the Z630, the Mute Override checkbox needs to be **checked**. With this checked, VIA!TOOLS will not Autobuild an ELAN Mute command but it will allow you to program the Mute button with the TV's mute command.

- Channel Up and Down Buttons:

  The Channel buttons will be programmed with the TV's channel commands. To do this, check the Channel Override checkbox.



Add function buttons for the DVD source

Select the DVD source button and add Play, Stop, Pause, Up, Down, Left, Right and Enter function buttons:

This will allow the homeowner basic control of their DVD player.

- **To add function buttons to the DVD source** See PG **61**.

Align function buttons for the DVD source

Align the Function Page Jump To buttons by one or all of the following methods:

- **To align the DVD's function buttons using Random guidelines** See PG **63**.
- **To align the DVD's function buttons using Fixed guidelines** See PG **64**.
- **To align the DVD's function buttons using your mouse** See PG **62**.
- **To align the DVD's function buttons using precision arrows.** See PG **63**.

System Bar Buttons for the DVD source button

The DVD's System Bar Buttons.

- Volume Buttons

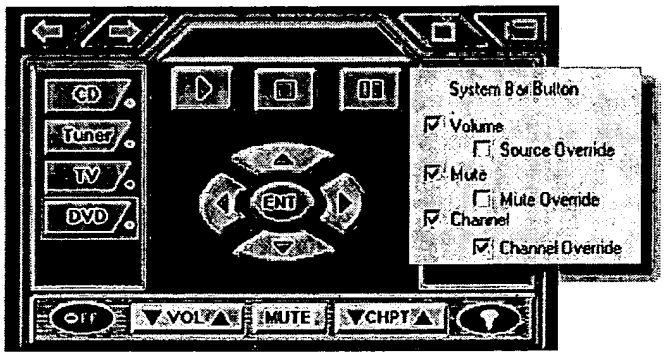
  Z630 will actually control the volume for the zone. To do this, the Z630 needs to receive ELAN default Volume IR commands from the VIA!. With the Volume's Source Override **unchecked**, VIA!TOOLS will Autobuild the ELAN default Volume IR commands to the Volume Up and Down buttons.

- Mute Button

  The Z630 will actually mute the zone's volume. To do this, the Z630 needs to receive ELAN default Mute IR command from the VIA!. With the Mute's Mute Override **unchecked**, VIA!TOOLS will Autobuild the ELAN default Mute IR commands to the Mute button.

- Channel Up and Down Buttons:

  The Channel buttons will be programmed with the DVD's Next and Previous Chapter commands. To do this, check the Channel Override checkbox.



Renaming System Bar Buttons for the DVD source button

Rename the Channel Up and Down buttons to reflect **Chapter**. You must first check the **Channel Override** checkbox for the **DVD** source or all source's Channel Up and Down System Bar Buttons will change to Chapter.

- **To rename the Channel Up and Down buttons to Chapter for the DVD source** See PG **62**.

Removing the Light Button

Since lighting will not be controlled by the VIA! remove the Light button.

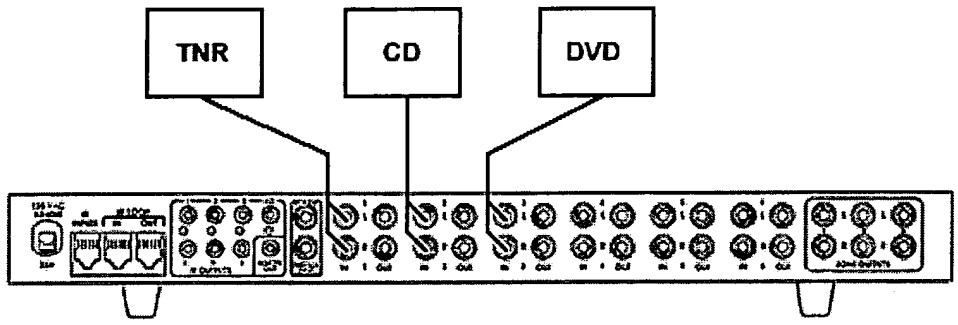
- **To remove the Light button** See PG **59**.

Programming the SetUp Screen

The SetUp Screen will notify VIA!TOOLS upon Autobuild to assign Source buttons with ELAN default IR source select commands.

Since the CD, TNR and DVD audio will be connected to the Z630's audio inputs, assign the TNR source button to audio "1", the CD source button to audio "2" and the DVD source button to audio "3".

Since the TNR was assigned source 1 you have to physically attach the TNR's audio output to source Input 1 on the Z630. The CD's audio is physically attached to Input 2 and the DVD to source Input 3.



When the source buttons are pressed, they will send an ELAN source select command to the Z630 and in-turn the Z630 will route the appropriate source to the zone.

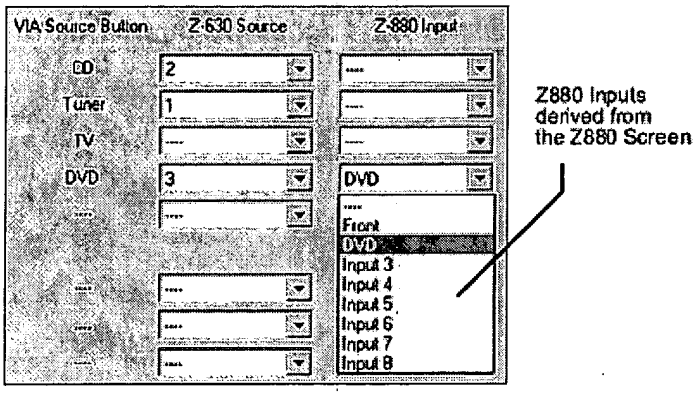
- **To assign the Tuner, CD and DVD source buttons with ELAN default audio commands** See PG **74**.

Since DVD has video associated with it, select DVD from the Z880 Input dropdown box.

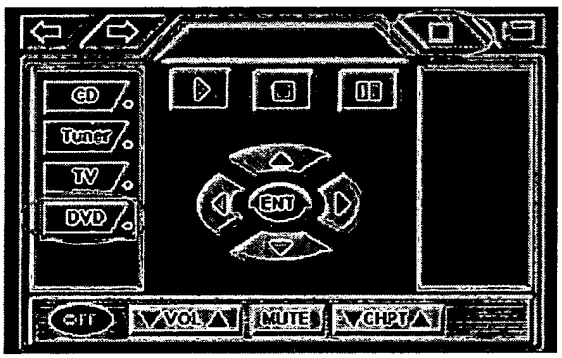
When the DVD source button is pressed, it will not only send the ELAN source select command to the Z630 but will also send the appropriate Input/Output commands to the Z880 which in-turn routes the video signal to the VIA! panel. The video will not automatically display. You will have to press the Video button to view the video.

Since the CD and TNR sources do not have video, their Z880 inputs do not need to be programmed.

- **To assign the DVD source buttons with ELAN Z880 commands** See PG **74**.



Since the Z880 Input has a selection for the DVD source button, VIA!TOOLS automatically displays the Video button when the DVD button is selected. This is because the **Linked To Z880 Input checkbox** is checked. The CD, Tuner and TV source buttons do not display the Video button when selected.

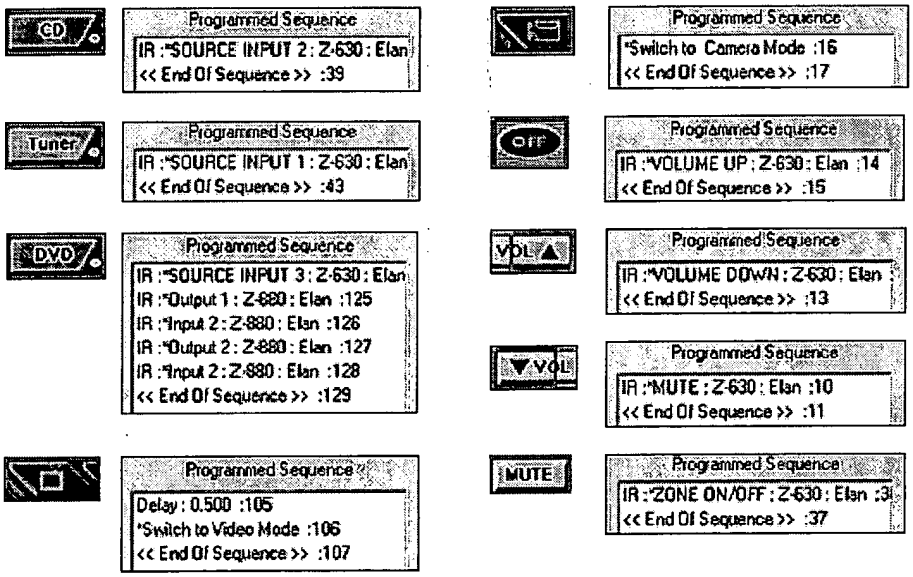


Autobuild the Panel

The Autobuild feature automatically inserts **ELAN default system commands** under specific VIA! **buttons**. This greatly reduces the programming time.

- **To Autobuild** See PG **77**.

The following illustrates what commands have been Autobuild on buttons.



Notice all of the commands start with **IR :***. The asterisk * identifies the command has been Autobuild. If the command was assigned to the button by the programmer, the asterisk * will not be displayed.

Programming Function Buttons

Function buttons for each source need to be programmed to control the CD, TNR, DVD and TV.

Program the CD source

- **To program the CD source function buttons with IR** See PG **80**.

Play, Pause, Stop, Rewind, Fast Forward, Track Up and Track Down buttons need to be programmed with their respective Sony RM-P2000 IR commands.

Program the Tuner source

- **To program the Tuner source function buttons with IR** See PG **80**.

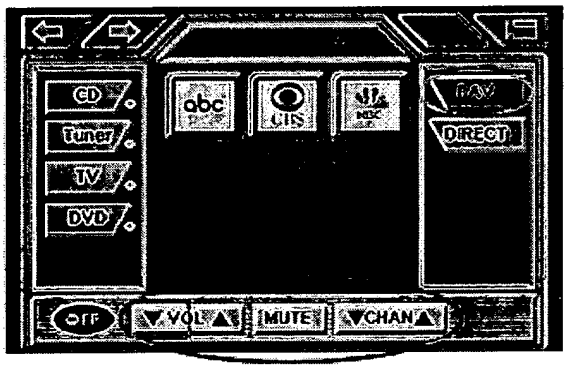
106.3, 101.1 and 93.5 buttons need to be programmed with Kenwood's Preset 1, Preset 2 and Preset 3 IR commands. Program the Kenwood Presets to the correct frequencies.

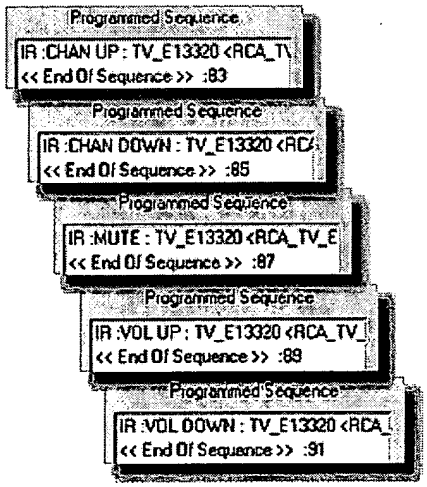
Program the TV source

- **To program the TV source function buttons with IR** See PG **80**.

ABC, CBS and NBC buttons need to be programmed with local channel numbers. IE: 02, 08 and 10. The keypad numeric buttons need to be programmed with their respective RCA E13320 IR numeric commands.

The CD and TUNER source button's Volume Up, Volume Down and Mute buttons were programmed by Autobuild. Since the TV's Volume Up, Down, Mute, Channel Up and Down have been source overridden on the Layout Screen, they need to be manually programmed with their respective RCA E13320 IR commands. You have to program these buttons on both the FAV and Direct function pages.

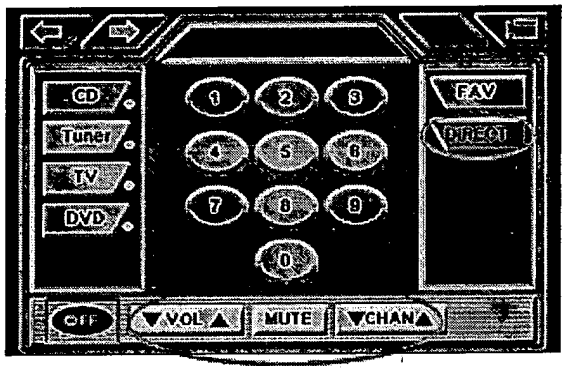


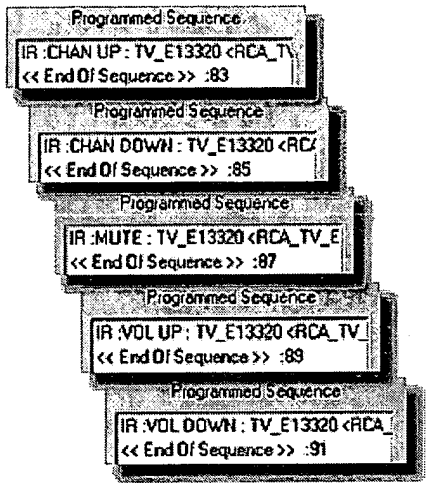


Routing IR out the Local Port for the TV source

Since the TV is a Local source, change IR routing to ensure all IR commands are being transmitted out the Local port.

- **To change all IR commands routing to the Local Port** See PG **29**.



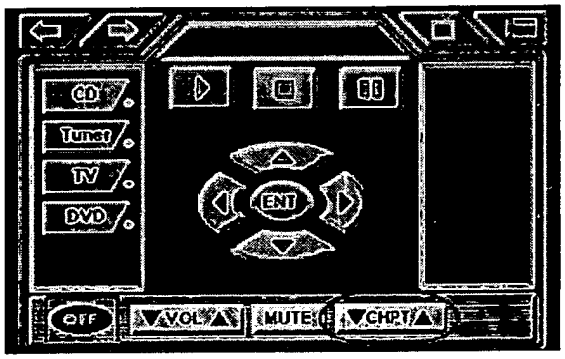


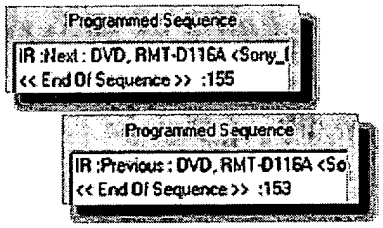
Program the DVD source

- **To program the DVD source function buttons with IR** See PG **79**.

Play, Stop, Pause, Up, Down. Left, Right and Enter buttons need to be programmed with their respective Sony RMT-D116A IR commands

The **Volume Up**, **Volume Down** and **Mute** buttons were programmed by Autobuild. Since the Chapter Up and Down buttons were overridden on the Layout Screen, they need to be programmed with Next and Previous chapter commands.





Trans

Downloading the Kitchen Panel

- **To download to the VIA!** See PG **89**.

The 2nd floor panel (Master Bedroom) needs to be programmed. It is identical to the 1st floor VIA! except it will not control the TV.

Copying To Other VIAs or ZPADs

The Kitchen VIA! has been programmed. Instead of manually programming the Master bedroom VIA!, VIA!TOOLS allows you to copy all programming from one panel to another by the use of **Copying Programmed VIAs/ZPADs to other VIAs/ZPADs**.

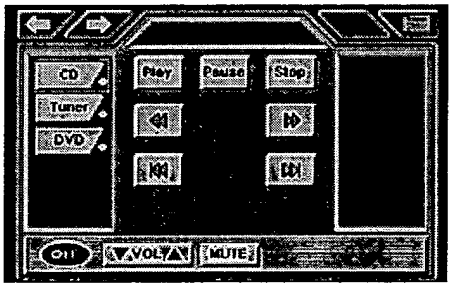
- **To copy the Kitchen VIA! to the Master bedroom VIA!** See PG **35**.

Now both VIA!s contain the same buttons and IR programming.

Removing the TV Source button from the Master bedroom VIA!

Since the TV is local to the Kitchen's VIA! and not the Master bedroom, the TV's source button in the Master bedroom needs to be removed to ensure the Kitchen's TV is not able to be controlled from the Master bedroom.

- **To remove the TV source from the Master bedroom VIA!** See PG **57**.
- **To move the DVD source up one source location** See PG **57**.



Downloading the Master Bedroom Panel

- **To download to the VIA!** See PG **89**.

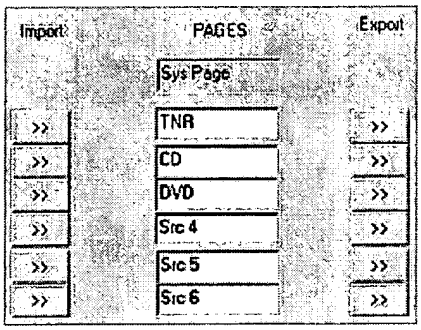
Ensure the **Autobuild Before Download** checkbox is checked. **This is important.** The Master Bedroom panel is identical to the Kitchen panel. This includes Output 1 and 2 Z880 commands for the Kitchen panel. The Master Bedroom panel needs Output 3 Z880 commands. It needs Output 3 because we assigned the Master Bedroom panel to Output 3 on the **Z880 Screen**. With the **Autobuild Before Download** checkbox checked, VIA!TOOLS re-Autobuilds the panel which in-turn assigns the Output 3 Z880 commands to the appropriate buttons.

Programming the Garage ZPAD

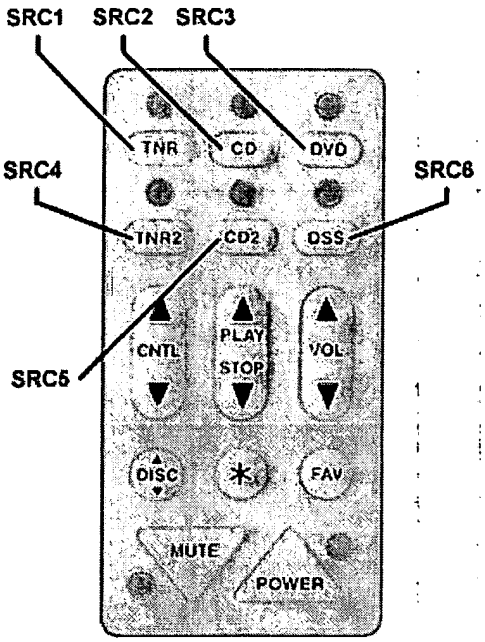
The Garage ZPAD panel (Garage) needs to be programmed.

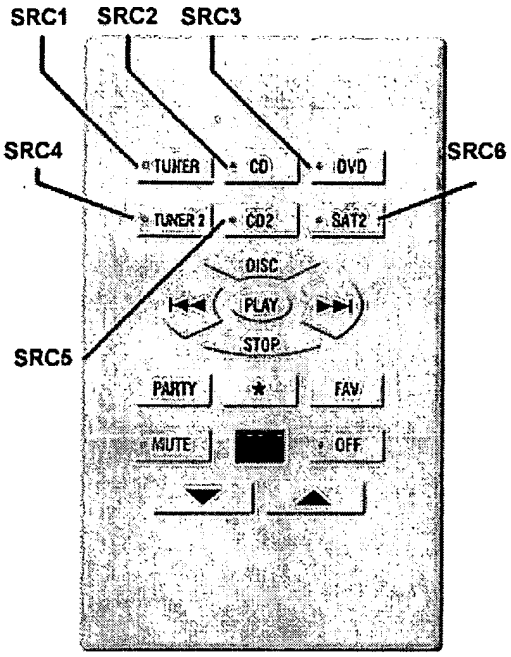
Since we are controlling a TNR, CD and DVD source, name the sources TNR, CD and DVD.

- **To name the ZPADs source names in VIA!TOOLS** See PG **91**.



Since we assigned DVD to SRC 3, we have to physically rearrange the ZPAD source keys. The DVD source key needs to be place in the top right source location (SRC 3). The following illustrates key to SRC location.





NOTE: SRC 7, SRC 8, SRC 9 and SRC 10 sources are *TNR, *CD, *DVD and *TNR2 respectively.

NOTE: The above source keycaps TNR2, CD2 and DSS can be replaced with blank keycaps to ensure the end-user does not think they have access to sources they do not have.

Setup

The ZPAD is located in the Garage. Since there is not a television in the garage, the Z880 Input dropdown does not need to be programmed. If a television was in the garage, we could select DVD in the Z880 dropdown box. When the DVD button on the ZPAD is pressed, the Z880 would route video to the television.

AutoB

Autobuild does not need to be performed since Z880 IR commands do not need to be assigned to the source keys.

Adding IR to the Garage ZPAD keys

Program the TNR keys with IR

ZPAD keys for each source need to be programmed to control the TNR, CD and DVD.

Radio Station Select buttons need to be programmed with Kenwood's Preset 1, Preset 2 and Preset 3 Kenwood VR-5900 IR commands. Program the Kenwood Presets to the correct frequencies.

- **To program the Tuner keys with IR** See PG **97**.

Program the CD keys with IR

Play, Pause, Stop, Rewind, Fast Forward, Track Up and Track Down buttons need to be programmed with their respective Sony CD RM-P2000 IR commands.

- **To program the CD keys with IR** See PG **97**.

Program the DVD keys with IR

Play, Stop, Pause, Up, Down. Left, Right, Enter, Next and Previous chapter buttons need to be programmed with their respective Sony DVD RMT-D116A IR commands

- **To program the DVD keys with IR** See PG **97**.

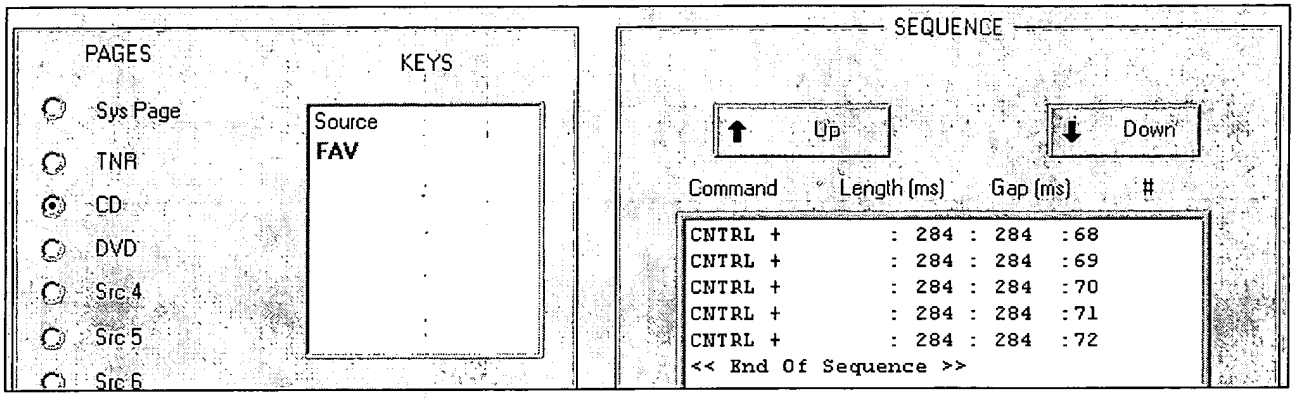
Programming a ZPAD Sequence

The homeowner wants to select their favorite song from their CD player which is track 5 every time they press the Fav key. To do this, a sequence needs to be created.

- **To program a sequence on the FAV key** See PG **99**.

Use track up 5 times to create the sequence. Track Up was programmed on the CNTRL Up button on the IR page.

Application 1



Whenever the CD source is selected and the FAV key is pressed the ZPAD will transmit the Track Up command 5 times to play the 5th song.

To give the CD player time to respond to each Track Up command, increase the Gap time (Gap time is the delay time between IR commands).

- **To change the gap time (delay) between Track Up commands** See PG **101**.

Downloading to the Garage ZPAD

Trans

- **To download to the ZPAD** See PG **102**.

Application 2

Application 2

Application 2 discusses how to use and program an Overlay page and how to wake the VIA! up to the front door camera.

The following features are in Application 2:

Overlay for the DVD source See PG **127**.

Create a blank DVD Overlay Page See PG **127**.

Move Overlay buttons See PG **128**.

Add IR commands to the DVD Overlay buttons See PG **128**.

Assign the DVD Overlay page to the DVD Video button See PG **128**.

Waking a VIA! up to the Front Door Camera See PG **129**.

Download the Kitchen VIA! See PG **130**.

Copy the Kitchen VIA! to the Master bedroom VIA! See PG **130**.

Remove the TV source button from the Master bedroom VIA! See PG **131**.

Download the Master Bedroom VIA! See PG **131**.

They would also like to Play and Pause the DVD while the video is being displayed on the VIA! without having to exit out of video mode.

They would also like to display the front door camera on the VIA!s when the doorbell is pressed.

Overlay for the DVD source

A DVD overlay will allow Play and Pause IR commands to be transmitted from the VIA! while the DVD is in video mode.

The Overlay command will be assigned to the DVD's video button.

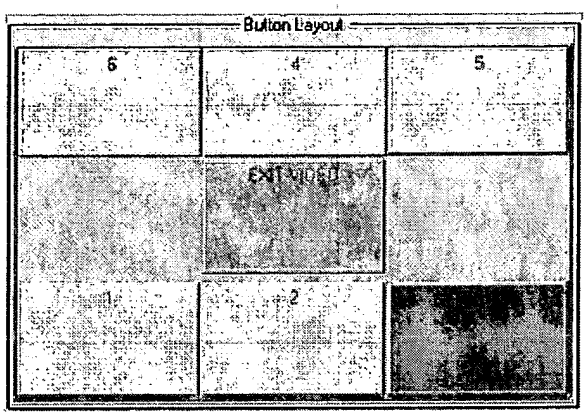
Start the Overlay page with 7 buttons and name it **DVD Overlay**.

Create a Blank Overlay Page

- **To create a blank DVD Overlay** See PG **70**.

Rearrange Overlay Buttons to resemble the following illustration

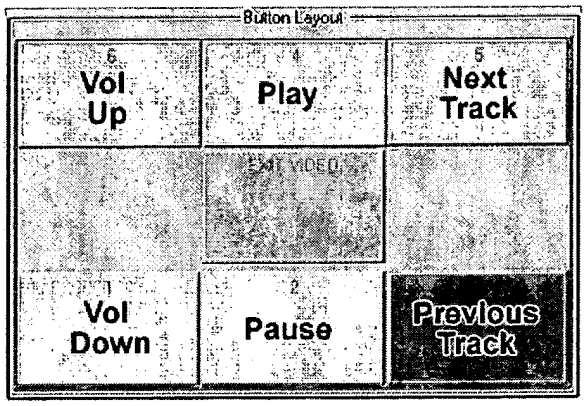
- **To move overlay buttons** See PG **71**.



Assign the ELAN ZPAD **Volume up** command to **button 6**, ELAN ZPAD **Volume Down** command to **button 1**, Sony DVD RMT-D116A **Play** command to **button 4**, Sony DVD RMT-D116A **Pause** command to **button 2**, Sony DVD RMT-D116A **Next** track command to **button 5** and Sony DVD RMT-D116A **Previous** track command to **button 3**.

Add IR commands to Overlay buttons

- **To add IR to overlay buttons** See PG **72**.



Assign the DVD Overlay page to the DVD Video button

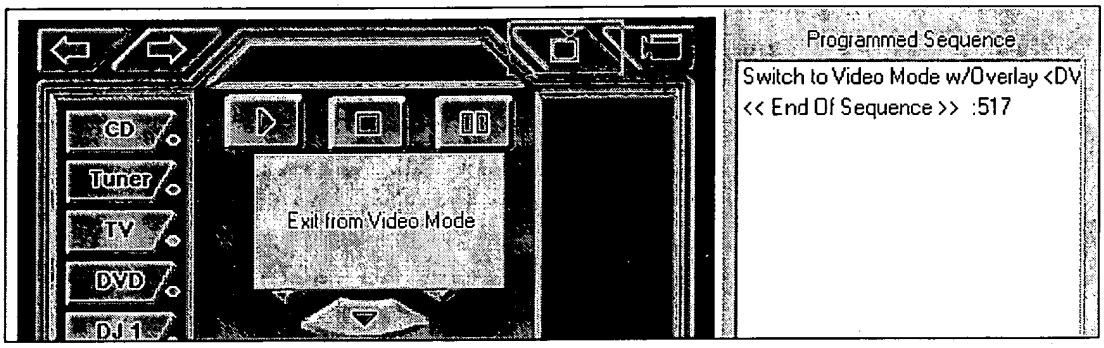
The DVD Overlay page has been created but has not been assigned to a button. We need to assign it to the DVD's Video button. When the homeowner presses the DVD source button the appropriate audio and Z880 IR commands are transmitted. When the Video button is pressed it displays video with the hidden DVD Overlay buttons we created.

Before assigning the DVD Overlay to the DVD's TV button, the DVD video button needs to be overridden. Overriding the DVD video button will allow the video button to be programmed with different commands than the other sources video buttons.

- **To override the DVD's TV button** See PG **60**.

Since the DVD's video button is overridden, add the DVD Overlay to the video button.

- **To add the DVD overlay to the DVD's TV button** See PG **26**.



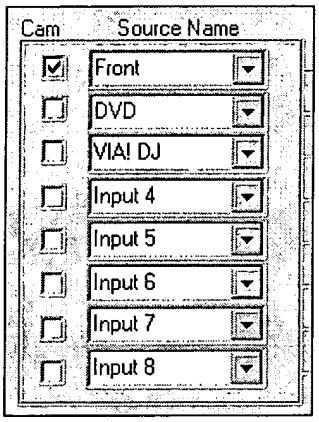
Waking a VIA! up to the Front Door Camera

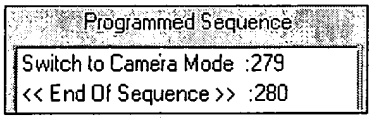
Whenever the doorbell is pressed the VIA! can be programmed to wake up from it's timed darken state to the front door camera video. This will allow the homeowner to walk to a VIA! and see who is at the door without having to press any buttons on the VIA!.

To do this, you have to program a **Switch to Camera Mode** command to the **Z600 Page/DB On** button.

- **To assign a Switch to Camera Mode to the Z600 Page/DB On trigger** See PG **26**.

When the doorbell is pressed the Z600 notifies the Z630. The Z630 notifies the VIA! over the Z485 wires that the doorbell has been pressed. When the VIA! receives a doorbell pressed command, it executes any steps assigned to the **Z600 Page/DB On** button. The **Switch to Camera Mode** command wakes the VIA! up and displays the first Z880 input on the Z880 Screen that has the **Cam** checkbox checked, which happens to be the **Front** camera video.





Downloading the Kitchen Panel

- **To download to the VIA!** See PG **89**.

The 2nd floor panel (Master Bedroom) needs to be programmed. It is identical to the 1st floor VIA! except it will not control the TV.

Copying To Other VIAs or ZPADs

The Kitchen VIA! has been programmed. Instead of manually programming the Master bedroom VIA!, VIA!TOOLS allows you to copy all programming from one panel to another by the use of **Copying Programmed VIAs/ZPADs to other VIAs/ZPADs**.

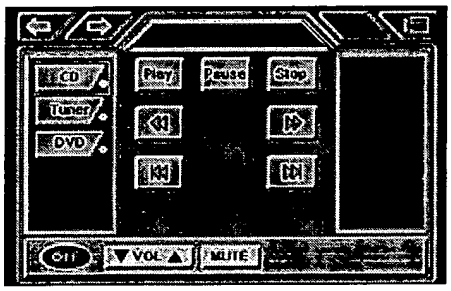
- **To copy the Kitchen VIA! to the Master bedroom VIA!** See PG **35**.

Now both VIA!s contain the same buttons and IR programming.

Removing the TV Source button from the Master bedroom VIA!

Since the TV is local to the Kitchen's VIA! and not the Master bedroom, the TV's source button in the Master bedroom needs to be removed to ensure the Kitchen's TV is not able to be controlled from the Master bedroom.

- **To remove the TV source from the Master bedroom VIA!** See PG **57**.
- **To move the DVD source up one source location** See PG **57**.



Downloading the Master Bedroom Panel

- **To download to the VIA!** See PG **89**.

NOTE: Ensure the **Autobuild Before Download** checkbox is checked. **This is important.** The Master Bedroom panel is identical to the Kitchen panel. This includes **Output 1** and **2** Z880 commands for the Kitchen panel. The Master Bedroom panel needs Output 3 Z880 commands. It needs Output 3 because we assigned the Master Bedroom panel to Output 3 on the **Z880 Screen**. With the **Autobuild Before Download** checkbox checked, VIA!TOOLS re-Autobuilds the panel which in-turn assigns the Output 3 Z880 commands to the appropriate buttons.

Application 3

Application 3

Application 3 describes how to wake a VIA! up to a camera video other than the first checked camera on the Z880 screen, how to wake up 2 VIA!s to the Front door camera when the front doorbell is pressed and the Back door camera when the back doorbell is pressed, how to direct access cameras using a Camera Source button and how to program the VIA! to wake up in a HD system.

The following features are in Application 3:

Application 3

Waking a VIA! up to a camera video with a doorbell press (HD System) See PG **147**

Program the Local Port ON button See PG **147**

MCUPRO programming See PG **148**

HD to VIA! wiring See PG **148**

A month has past and homeowner has decided they would like a camera located at their back door and a camera at the pool.

The doorbell at the back door needs to wake up both VIA!s to the back door camera but the front door still needs to wake the VIA!s up to the front door camera.

Not only do they want the capability to use the Next Camera, Previous Camera, Scan On and Scan Off hidden buttons, they want direct access to the Front, Back and Pool camera video on the VIA!. When these buttons are pressed, the VIA! displays the appropriate camera video.

The following programming steps need to be performed in the same sequence.

Understanding how the VIA! displays camera video

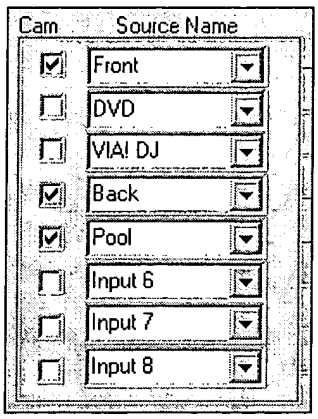
Program the Z880 Screen

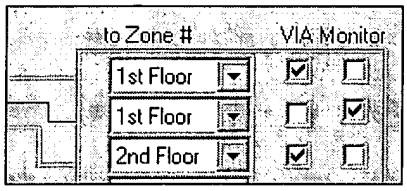
The Back door camera and Pool camera needs to be assigned on the Z880 Screen.

- Check the **Camera** checkbox for **Input 4** and **Input 5**.
- Type **Back** in **Input 4** dropdown box and **Pool** in **Input 5** dropdown box.

This will allow the Back and Pool camera video to be routed to both the Kitchen and Master Bedroom VIA!s.

The Z880 outputs will stay the same as programmed previously.





Autobuild

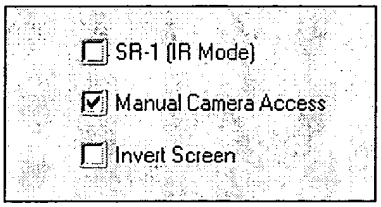
Autobuilding automatically Autobuilds the Camera Screen with the appropriate Z880 commands and **ELAN default system commands** under specific VIA! **buttons**. This greatly reduces the programming time.

- **To Autobuild** See PG **77**.

Autobuild programmed the following Camera Screen buttons. They coincide with the **Camera** checkboxes checked on the **Z880 Screen**.

Display the Camera Screen

First, display the **Camera Screen** by checking the **Manual Camera Access** checkbox on the **System Screen**.

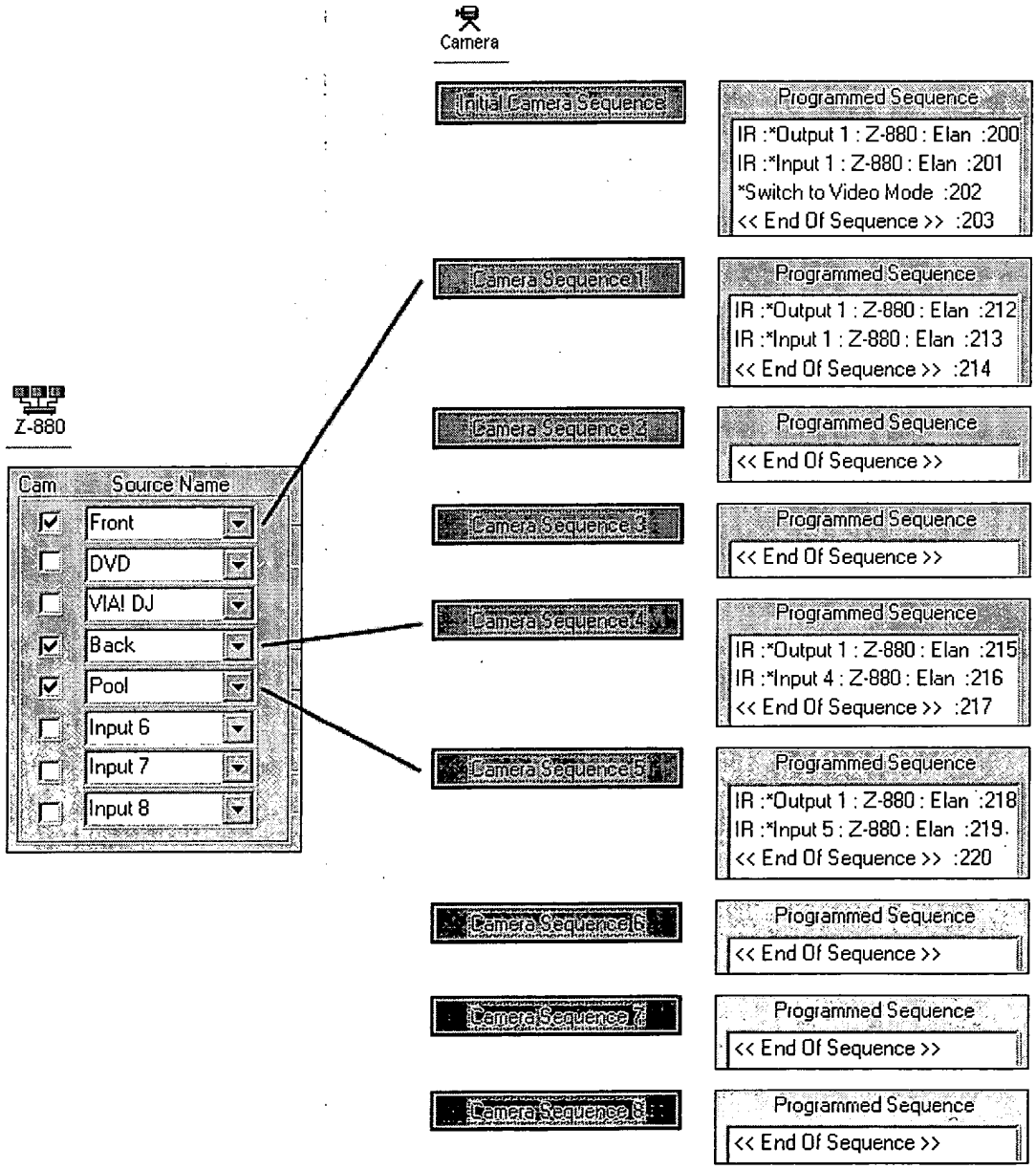


- **To display the Camera Screen** See PG **83**.

NOTE: From this point on, do not uncheck the **Manual Camera Access** checkbox; it will interfere with programming.

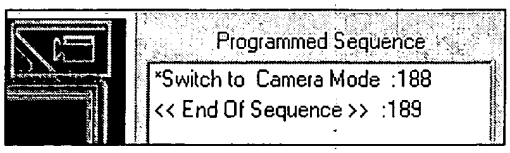
Camera

The following buttons are programmed on the **Camera Screen**. They coincide with the **Camera** checkboxes checked on the **Z880 Screen**. Autobuild programmed the following Camera Screen buttons.

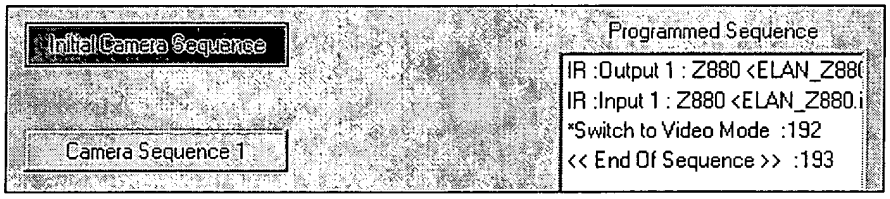


The **Initial Camera Sequence** button is programmed with the first camera check on the **Z880 Screen**.

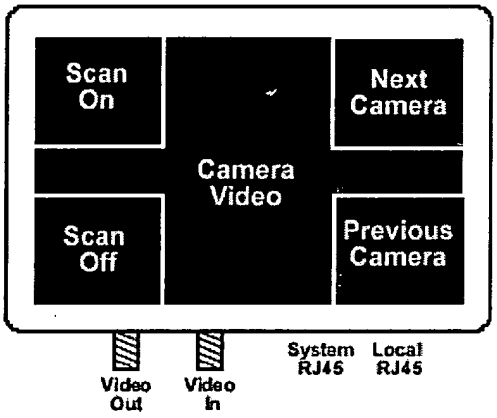
When the Camera button is pressed, the **Switch to Camera Mode** tells the VIA! to go to the **Camera Screen** and perform the **Initial Camera Sequence** button.



The **Initial Camera Sequence** button tells the Z880 to send **Input 1** (**Front** camera) to the VIA! and then the **Switch to Video Mode** tells the VIA! to display Front door camera video.



When the VIA! goes to the Camera Screen, you automatically have the **Next Camera**, **Previous Camera**, **Scan On** and **Scan Off** hidden buttons.



When the **Next Camera** is pressed the VIA! looks at **Camera Sequence 1** button. If it is programmed, it performs the programming steps and stops. If it is not programmed, it looks at **Camera Sequence 2** button. If it is programmed, it performs the programming steps and stops. The **Previous Camera** button looks at **Camera Sequence 8** button and then **7** and then **6** etc...

The **Scan On** acts the same as **Next Camera** except it performs the Camera Sequence steps, waits and performs the next Camera Sequence button that is programmed waits and performs etc...

Application 3

Displaying a different camera's video other than the first camera checked on the Z880 Screen when the Camera Button is pressed (In this example, other than the Front).

 When the Camera Button is pressed, make it display the Back camera.

Open the homeowner's project and select the **Kitchen** panel in the **1st Floor** zone.

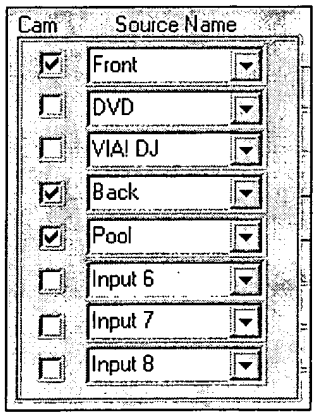
Program the Z880 Screen

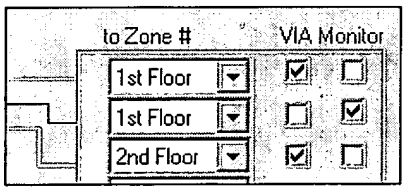
The Back door camera and Pool camera needs to be assigned on the Z880 Screen.

- Check the **Camera** checkbox for **Input 4** and **Input 5**.
- Type **Back** in **Input 4** dropdown box and **Pool** in **Input 5** dropdown box.

This will allow the Back and Pool camera video to be routed to both the Kitchen and Master Bedroom VIA!s.

The Z880 outputs will stay the same as programmed previously.





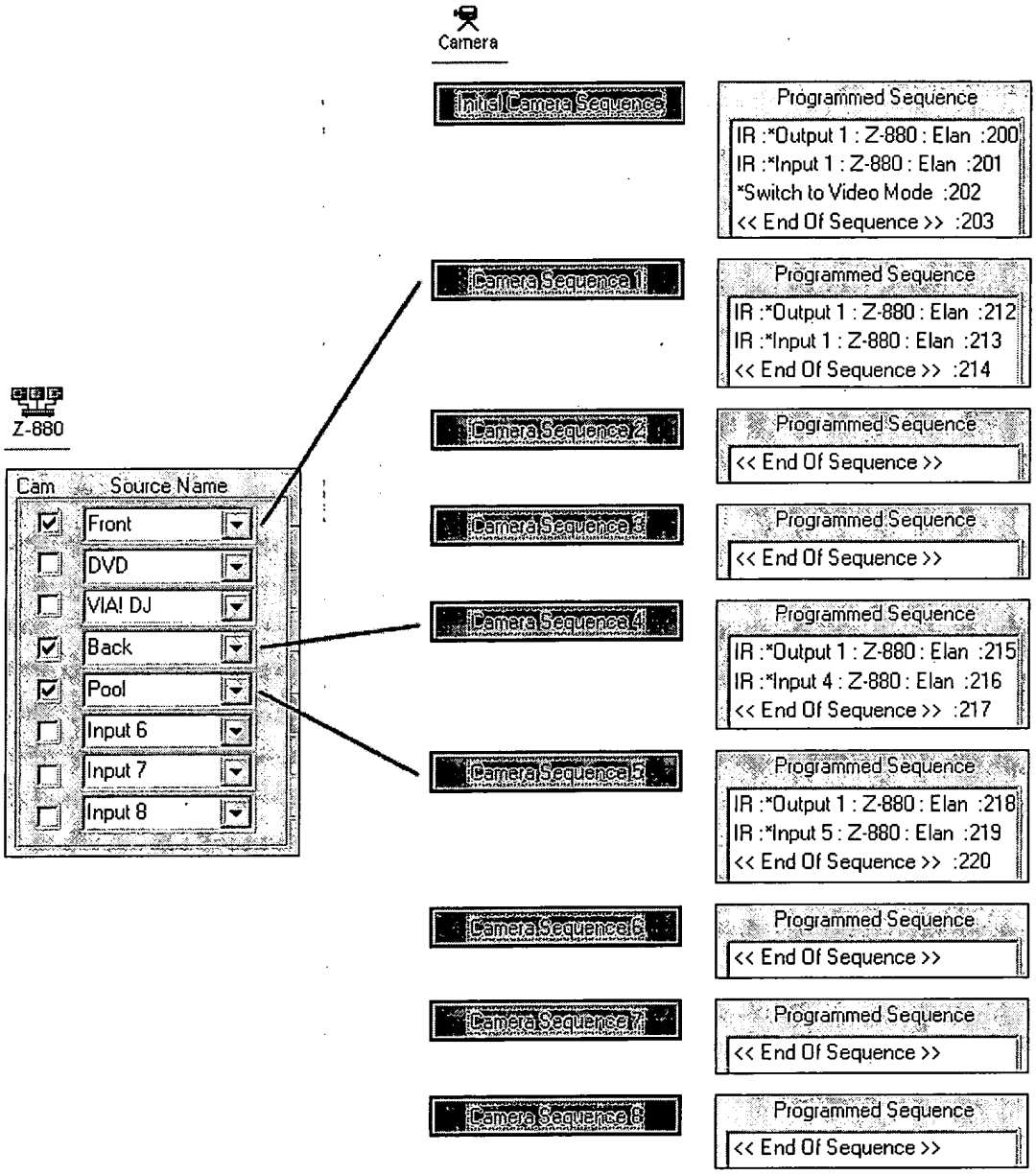
Autobuild

Autobuilding automatically Autobuilds the Camera Screen with the appropriate Z880 commands and **ELAN default system commands** under specific VIA! **buttons**. This greatly reduces the programming time.

- **To Autobuild** See PG **77**.

Autobuild programmed the following Camera Screen buttons. They coincide with the **Camera** checkboxes checked on the **Z880 Screen**.

Application 3

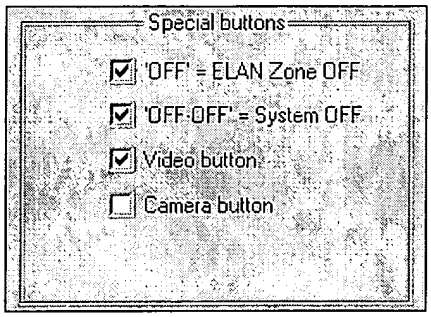


Preparing VIA!TOOLS to Program buttons

After Autobuilding you must uncheck the **Camera** checkbox on the Autobuild Screen.

- Uncheck the **Switch to Camera Mode** checkbox on the Autobuild Screen.

Un-checking the **Camera Button** checkbox, will not allow VIA!TOOLS to **re-Autobuild** the Camera button with a **Switch to Camera Mode** and the **Camera Screen** with Z880 Commands.

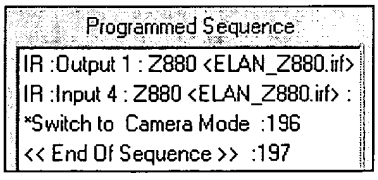


Add Z880 commands to the Camera button.

To make the VIA! display a different camera video (Back camera) other than the first camera checked on the Z880 Screen, assign Z880 commands to the Camera Button.

When the **Camera** button is pressed, tell the Z880 to select the **Back** camera (Output 1 Input 4).

- **To program the camera button with IR** See PG **78**.



NOTE: The **Z880** IR commands must be above the **Switch to Camera Mode** command. Any commands after a **Switch to Camera Mode** are ignored.

Application 3

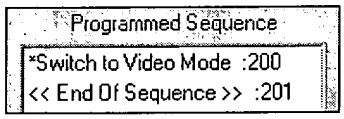
Remove Z880 commands from the Initial Camera Sequence button.

When you press the Camera Button, the Z880 routes the **Back door camera** (**Output 1 Input 4**) to the VIA!. The **Switch to Camera Mode** tells the VIA! to go to the **Camera Screen** and perform the **Initial Camera Sequence** button.

The **Initial Camera Sequence** button is programmed with **Output 1 Input 1**. **Input 1** is the **Front door** camera. .We do not want to view the **front door** camera; we want to view the **Back door** camera.

To fix this, remove **Output 1 Input 1** from the **Initial Camera Sequence** button.

- **To remove Output 1 Input 1 from the Initial Camera Sequence button** See PG **26**.



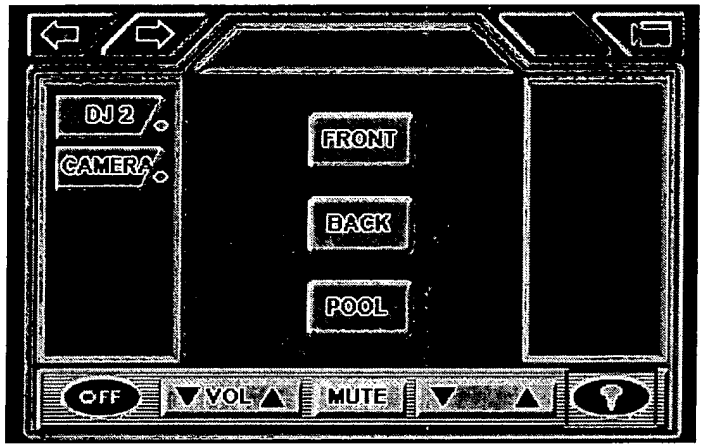
Now, when you press the Camera button, the Z880 routes the **Back door camera** (**Output 1 Input 4**) to the VIA!. The **Switch to Camera Mode** tells the VIA! to go to the **Camera Screen** and perform the **Initial Camera Sequence** button.

The **Initial Camera Sequence** button is programmed with a **Switch to Video** mode. The correct video will be displayed. Since the VIA! entered the Camera Screen, the user has access to **Next Camera**, **Previous Camera**, **Scan On** and **Scan Off** hidden buttons.

Directly accessing the Front, Back and Pool cameras by pressing buttons on a Camera source button.

To give homeowner direct access to each camera, add a **Camera** source button with a **Front**, **Back** and **Pool** function button.

Prior to performing the following steps, you must complete **Displaying a different camera's video other than the first camera checked on the Z880 Screen when the Camera Button is pressed (In this example, other than the Front).** See PG **137**.



Program the Layout Screen

Add a camera source button

- **To add a camera source button** See PG **54**.

Add Front, Back and Pool function buttons

Select the Camera source button and add a Front, Back and Pool function buttons:

- **To add the Front, Back and Pool function buttons** See PG **61**.

Align the Camera's source function buttons

Align the buttons by one or all of the following methods:

- **To align the Camera's function buttons using Random guidelines** See PG **63**.
- **To align the Camera's function buttons using Fixed guidelines** See PG **64**.
- **To align the Camera's function buttons using your mouse** See PG **62**.
- **To align the Camera's function buttons using precision arrows**. See PG **63**.

Program the Camera's System Bar Buttons

Although the Camera source does not have audio, leave the **Volume Up** and **Down** and **Mute** buttons displayed in case the homeowner wants to control audio while viewing the cameras.

- Volume Buttons

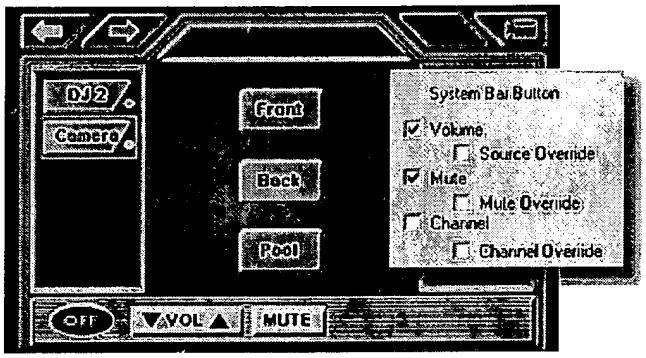
Z630 will actually control the volume for the zone. To do this, the Z630 needs to receive ELAN default Volume IR commands from the VIA!. With the Volume's Source Override **unchecked**, VIA!TOOLS will Autobuild the ELAN default Volume IR commands to the Volume Up and Down buttons.

- Mute Button

The Z630 will actually mute the zone's volume. To do this, the Z630 needs to receive ELAN default Mute IR command from the VIA!. With the Mute's Mute Override **unchecked**, VIA!TOOLS will Autobuild the ELAN default Mute IR commands to the Mute button.

- Channel Up and Down Buttons:

The Channel Up and Down Buttons are not being used for the Camera source button so uncheck the Channel checkbox.



Program the SetUp Screen

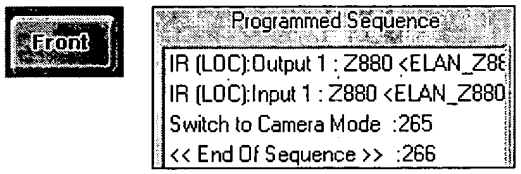
Since the Camera source button does not have associated audio, do not assign a Z630 Source input. Since the Camera source button does not have video assigned to it, do not assign Z880 Input.

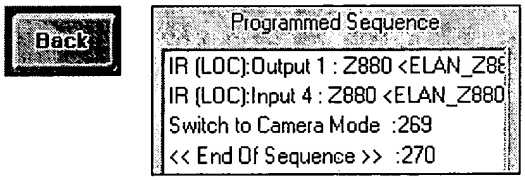
Program the Camera Source's function buttons

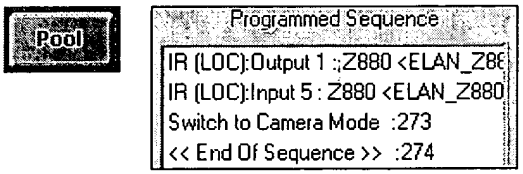
The **Front, Back** and **Pool** function buttons need programmed with **Z880** and **Switch to Camera Mode** commands.

- **To program the Front, Back and Pool function button with IR** See PG **80**.
- **To add a Switch to Camera Mode command to each button** See PG **26**.

NOTE: The Switch to Camera Mode has to be after the Z880 commands. If it is first, the Z880 commands will not be executed.







When the **Front** camera button is pressed the **Front** camera video is displayed.

When the **Back** camera button is pressed the **Back** camera video is displayed.

When the **Pool** camera button is pressed the **Pool** camera video is displayed.

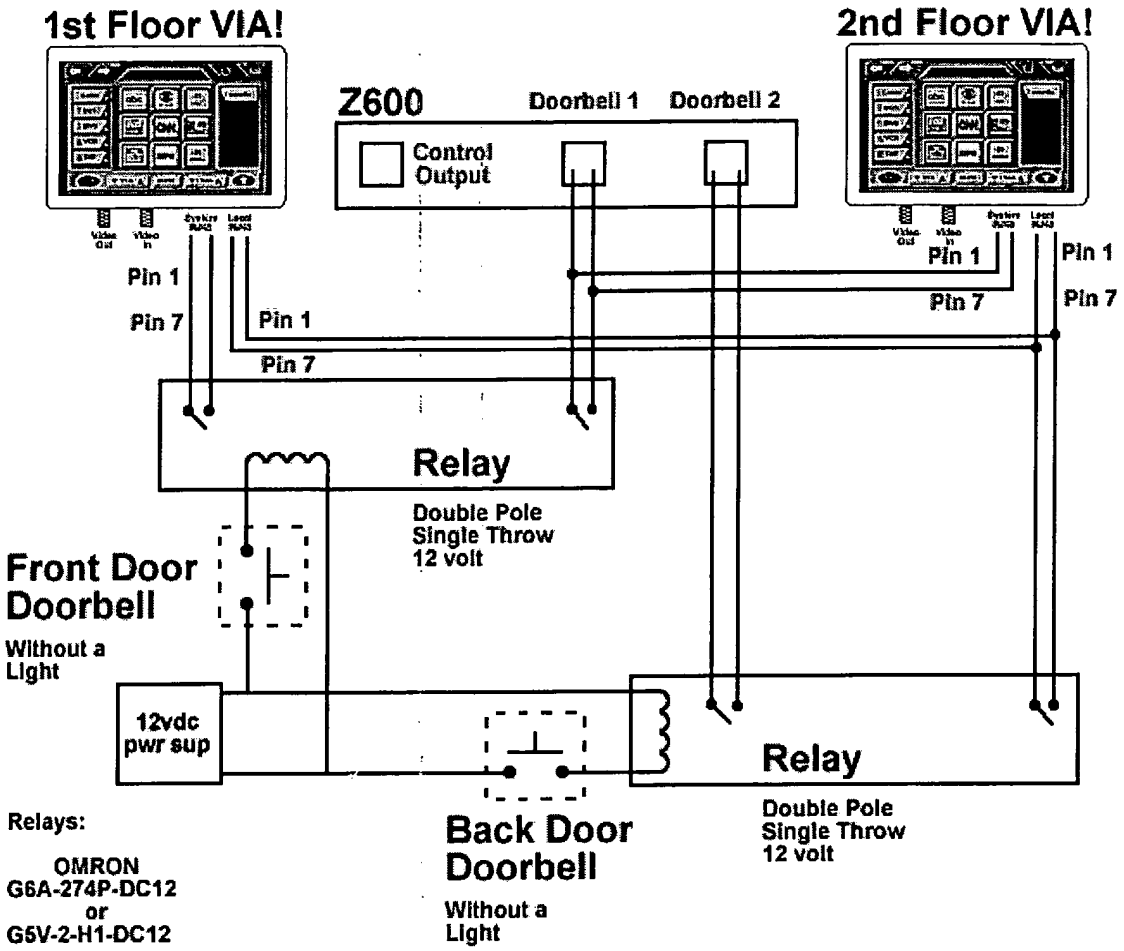
Waking the VIA! to different door camera video.

Prior to performing the following steps, you must complete **Displaying a different camera's video other than the first camera checked on the Z880 Screen when the Camera Button is pressed (In this example, other than the Front).** See PG **137**.

We previously programmed the VIA! to **Waking a VIA! up to the Front Door Camera** See PG **129**.

Application 3

To wake both VIA!s up to the **Front** door camera video when the front doorbell is pressed or wake the VIA!s up to the **Back** door camera video when the back doorbell is pressed, consider the following illustration.



Trigger

When either doorbell is pressed, it routes 12vdc to it's Relay. The coil closes both it's contacts. The 1st contact, shorts the Z600's Doorbell which in-turn sounds the doorbell chime over the ELAN speakers. The 2nd contact shorts **Pin 1 sense** to **Pin 7 ground**. This notifies the VIA! to executes the Trigger Screen's **System Port ON** or **Local Port ON** sequence.

NOTE: Whenever **Pin 1** of either the **System** or **Local** port is shorted to ground, the corresponding Trigger Screen trigger is executed.

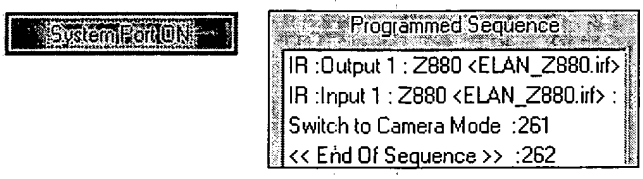
Application 3

Program System Port ON trigger for both the 1st Floor and 2nd Floor VIA!s.

Since we had to remove the **Z880** commands from the **Camera Screen's Initial Camera Sequence** button, add Z880 **Output 1 Input 1** command to the **System Port On** trigger button above a **Switch to Camera Mode**.

NOTE: Z880 **Input 1** is the front door camera (**doorbell 1**).

- **To program the System Port ON trigger with Z880 IR commands** See PG **86**.
- **To add a Switch to Camera Mode command to the System Port button** See PG **86**.

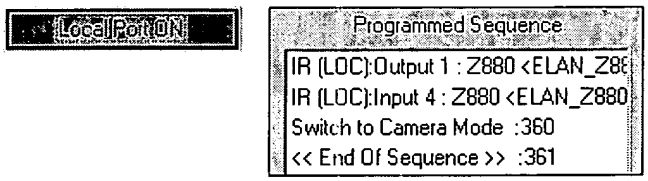


Program the Local Port ON trigger for both the 1st Floor and 2nd Floor VIA!s.

Since we had to remove the **Z880** commands from the **Camera Screen's Initial Camera Sequence** button, add Z880 **Output 1 Input 4** command to the **Local Port On** trigger button above a **Switch to Camera Mode**.

NOTE: Z880 **Input 4** is the back door camera (**doorbell 2**).

- **To program the Local Port ON trigger with Z880 IR commands** See PG **86**.
- **To add a Switch to Camera Mode command to the Local Port button** See PG **86**.



NOTE: The **Z600 PAGE/DB ON** button on the **Trigger Screen** was programmed in **application 2** with a **Switch to Camera Mode**. To ensure the VIA!s wake to the correct Front or Back camera video, the **Switch to Camera Mode** command needs to be removed from the **Z600 PAGE/DB ON**.

Application 3

Waking a VIA! up to camera video with a doorbell press (HD System)

The HD System only has the **Local Port ON** and **OFF** buttons to program on the Trigger Screen.

The **System Port On** and **OFF** buttons are not displayed because **Pin 1** on the System port for HD is **Status feedback**. If you short Pin 1 on the System port to ground you will not receive system feedback from the MCU and display it on the VIA!. In a **Z system**, the feedback is sent over **Pin 3** and **Pin 4** to the VIA!.

The **Z600 Page/DB ON** and **OFF** buttons are not displayed because the HD system uses the **HDC2050 Telephone Card**.

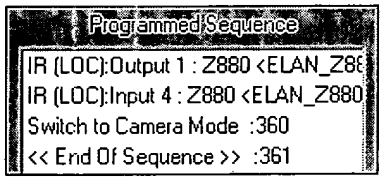
Program the Local Port ON button.

Since there is only one button to be programmed, a VIA! in a HD system can wake up to only one camera video.

The **Local Port ON** button needs to be programmed with **Z880 commands** and a **Switch to Camera Mode** command.

NOTE: Z880 **Input 4** is the back door camera (**doorbell 2**).

- **To program the Local Port ON trigger with Z880 IR commands** See PG **86**.
- **To add a Switch to Camera Mode command to the Local Port button** See PG **86**.



MCUPRO programming

To execute the program assigned to the Local Port ON button, a short needs to be routed to the VIA!'s Local Port Pin 1.

MCUPRO can be programmed to close a relay when a doorbell has been pressed. When the relay closes a ground can be routed to Pin 1 of the VIA!'s Local Port.

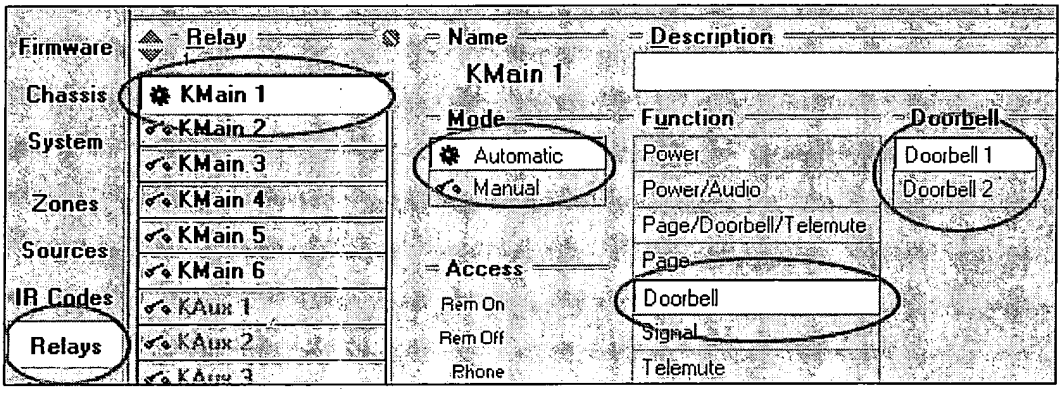
Select the **Relay Screen**.

Select the Relay that will close when the Doorbell is pressed, **KMain 1**.

Select Mode **Automatic**.

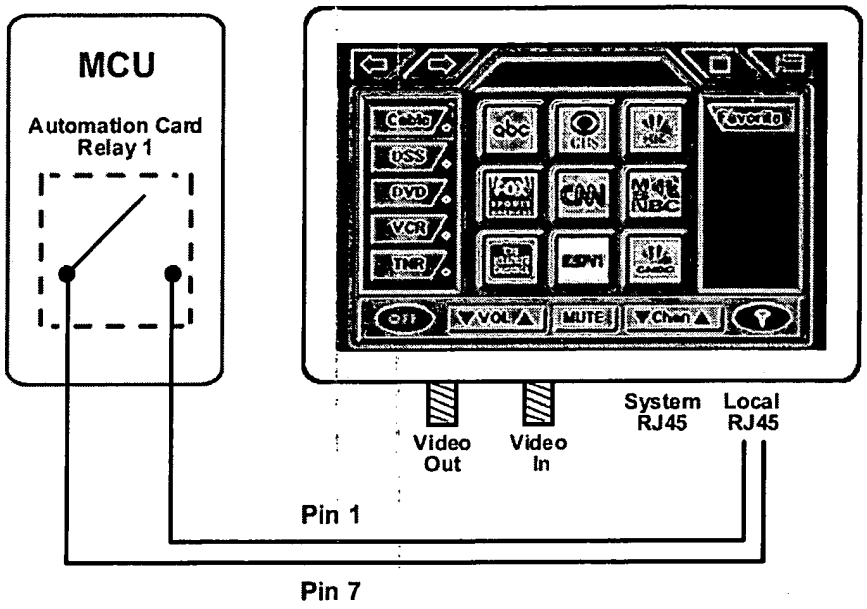
Select Function **Doorbell**.

Select Doorbell **Doorbell 1**.



Application 3

HD to VIA! wiring



When **Doorbell 1** is pressed, **Relay 1** is closed which in-turn routes **Pin 7 ground** to **Pin 1**. When the VIA! detects the short to ground, it executes the sequence on the **Local Port ON** button.

Application 4

Application 4

Application 4 describes how to automatically detect motion and in-turn turn a TV ON and how to ensure a source's power is ON or OFF using intelligent commands.

The following features are in Application 4:

Automatically turn the TV on with a Local SR1 and a motion sensor See PG **151**.

Display the Local SR1 Triggers on the Trigger Screen See PG **151**

Program Local Sense Port 1 to turn the TV on See PG **151**

Program Local Sense Port 1 to ensure the TV stays on See PG **153**

Program Source Buttons and the OFF button to ensure the equipment stays ON or OFF See PG **153**.

Program Source buttons with Intelligent ON commands See PG **154**

Program the System Off button with Intelligent OFF commands See PG **155**

The homeowner has approached the installer and asked if the Kitchen television can automatically turn on and be changed to ABC when they walk into the Kitchen.

They want to know it there is a way to ensure the DVD, CD and TNR are powered ON if they are ON or off and powered OFF if they or ON or OFF.

Both these features can be accomplished with SR1s. SR1s have 8 sense, 8 IR Ports and 6 relays.

The 8 sense ports, in conjunction with the 8 IR Ports, can perform intelligent power sensing.

You can assign commands to a button to ensure the DVD player is ON no matter if the DVD player is ON or OFF.

You can assign commands to a button to ensure the DVD player is OFF no matter if the DVD player is ON or OFF.

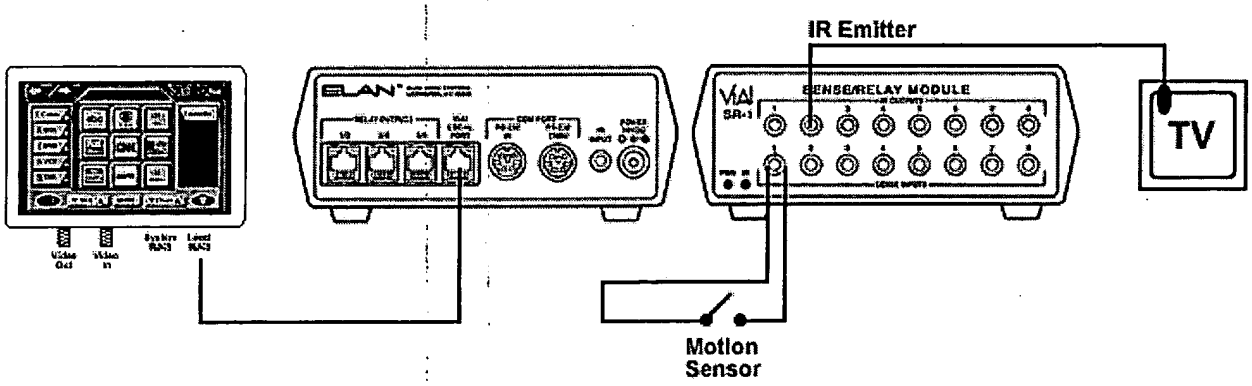
The 6 relays can be toggled, opened or closed. They can control drapes, garage doors etc...

The sense ports can also automatically trigger sequence buttons when a short is detected. The SR1 must be connected to the Local port of a VIA!.

Application 4

Automatically turning the TV on with a Local SR1 and a Motion Sensor

To turn the television on and turn to a specific station when the homeowner walks in a room, the following diagram must be considered.



Notice that an **RJ45** is connected from the **VIA's Local** port to the **SR1's VIA! Local Port**. The Television is being controlled by an emitter connected to the SR1's **IR Port 2**.

Whenever the Motion Sensor detects a motion, it will short. The SR1 detects that Sense Port 1 has been shorted. The SR1 automatically sends a RS485 message to the VIA! through the RJ45 to RJ 45 cable. The VIA! receives the RS485 sense port 1 message and performs the **Local SR1 Trigger 1 ON** button sequence.

Display the Local SR1 Triggers

System

Open the homeowner's project and select the Kitchen panel in the 1st Floor zone.

To gain access to the **Local SR1 Triggers**, you must check the **Local Components SR-1** checkbox.

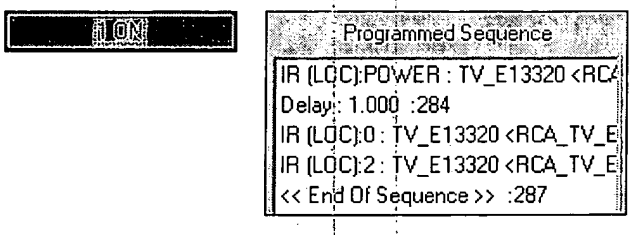
- **Select the Local SR1 Trigger checkbox** See PG 37.

Program Local Sense Port 1 to turn the TV on and select a channel

Trigger

Since the motion sensor is connected to Sense Port 1, select **1 ON** button and program it to turn the TV on and select ABC.

- **To ensure IR commands transmit out the Local Port add IR commands to the Local port** See PG 28.



NOTE: The 1 second delay allows the TV to warm up and be able to receive IR commands. You may have to increase or decrease this command for different televisions.

There is a problem with this program sequence. If the homeowner walks into the room the television turns on and selects ABC. If they trigger the motion sensor again, the television turns off.

To correct this, intelligent power sensing needs to be used or a discrete power command needs to be found for this RCA television. Since a discrete power command can't be found use intelligent power sensing.

There are three commands you use for intelligent sensing.

To ensure a device remains on:

Port X Intell ON (Sense Port the Sensor is attached)

The **Power** Command

Port X ON (IR port the emitter is controlling the device)

To ensure a device remains off:

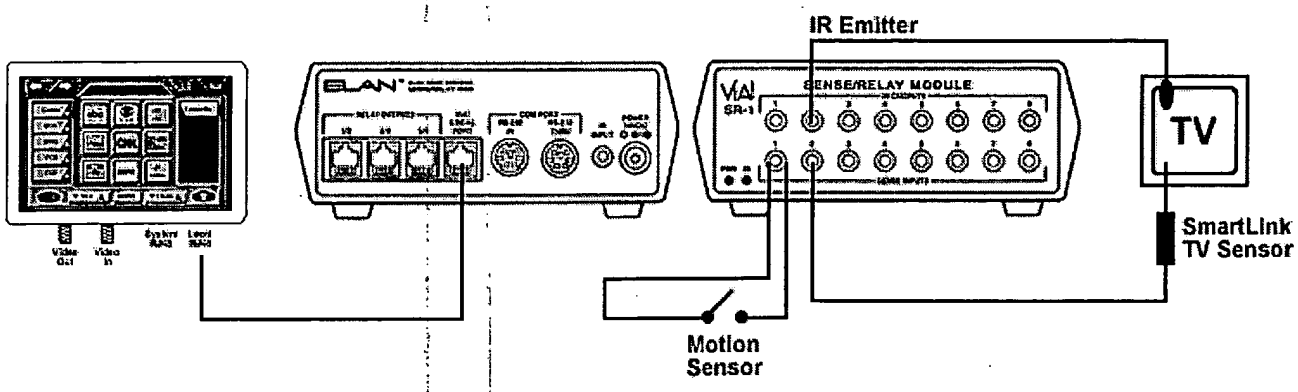
Port X Intell OFF (Sense Port the Sensor is attached)

The **Power** Command

Port X ON (IR port the emitter is controlling the device)

NOTE: The **X** is the port the sensor or emitter is attached to.

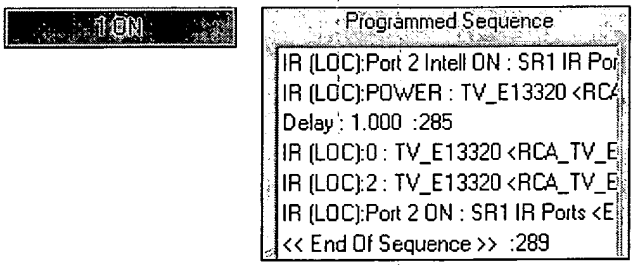
If a sensor is attached to **Port 7**, the IR emitter that will control the source must be in **IR Port 7**. The **Sense Ports** and **IR Ports** are **married**.



The above diagram shows an IR emitter in **IR Port 2** and the corresponding sensor in **Sensor Port 2**.

Program Local Sense Port 1 to ensure the TV stays ON with a motion sensor

- **To ensure IR commands transmit out the Local Port add IR commands to the Local port** See PG **28**.



The above program sequence will allow the homeowner to walk past a motion sensor as many times as they want. The TV will remain on.

Programming Source Buttons and the OFF button to ensure source equipment is ON or OFF prior to controlling the equipment.

To ensure the equipment is ON perform the following.

Intelligent ON commands need to be placed on **source buttons** to ensure the equipment is ON. When the source buttons are pressed, you ensure the source equipment is on prior to controlling it with function buttons.

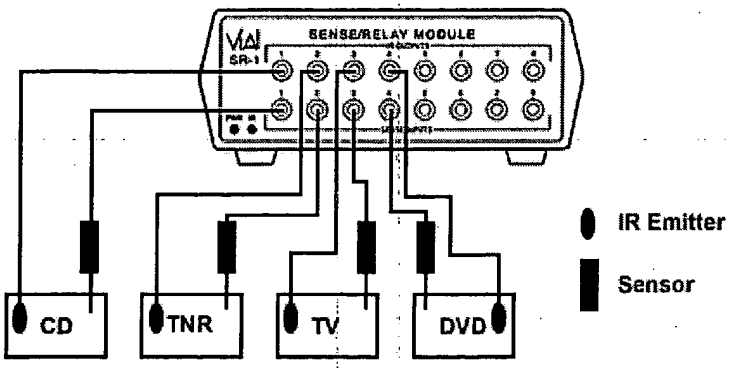
A **System SR1** needs to be added to the project. The System SR1 will be located at the head end by the DVD, CD and TNR.

There are three commands you use for intelligent ON sensing.

Port X Intell ON (Sense Port the Sensor is attached)

The **Power** Command

Port X ON (IR port the emitter is controlling the device)



Program Source Buttons with Intelligent ON commands

- **To program the source buttons with Intelligent IR commands** See PG **78**.

Programmed Sequence
IR :*SOURCE INPUT 2 : Z-630 : Elan
IR :Port 1 Intell ON : SR1 IR Ports <El
IR :Power : CD, RM-P2000 <Sony_CD
IR :Port 1 ON : SR1 IR Ports <ELAN_
<< End Of Sequence >> :235

Programmed Sequence
IR :Port 3 Intell ON : SR1 IR Ports <El
IR :POWER : TV_E13320 <RCA_TV_
IR :Port 3 ON : SR1 IR Ports <ELAN_
<< End Of Sequence >> :309

Programmed Sequence
IR :*SOURCE INPUT 1 : Z-630 : Elan
IR :Port 2 Intell ON : SR1 IR Ports <El
IR :POWER : VR_5900 <KENWOOD_
IR :Port 2 ON : SR1 IR Ports <ELAN_
IR :TUNER : VR_5900 <KENWOOD_
<< End Of Sequence >> :243

Programmed Sequence
IR :*SOURCE INPUT 3 : Z-630 : Elan
IR :*Output 1 : Z-880 : Elan :251
IR :*Input 2 : Z-880 : Elan :252
IR :*Output 2 : Z-880 : Elan :253
IR :*Input 2 : Z-880 : Elan :254
IR :Port 4 Intell ON : SR1 IR Ports <El
IR :Power : DVD, RMT-D116A <Sony
IR :Port 4 ON : SR1 IR Ports <ELAN_
<< End Of Sequence >> :258

Whenever a source button is pressed, the associated source turns ON if it is OFF or stays on if it is ON.

To ensure the equipment is OFF perform the following.

Program the System OFF button with Intelligent OFF commands

Intelligent OFF commands need to be placed on the **System OFF** button to ensure the equipment is OFF. When the **OFF** button is doubled tapped (the second tap of the OFF button is the **System OFF** button), all the sources are turned OFF.

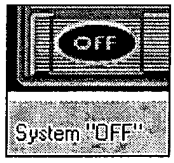
There are three commands you use for intelligent OFF sensing.

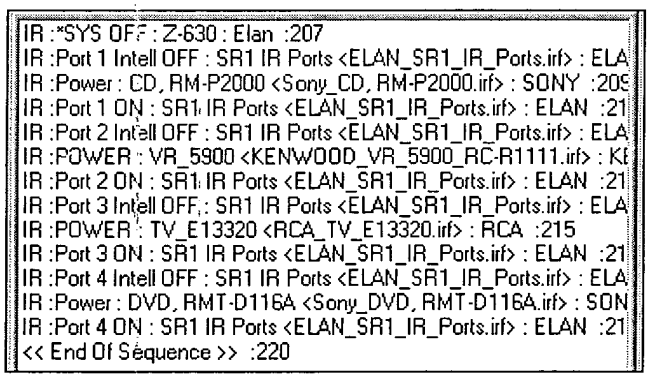
Port X Intell OFF (Sense Port the Sensor is attached)

The **Power** Command

Port X OFF (IR port the emitter is controlling the device)

- **To program the System OFF button with Intelligent IR commands** See PG **80**.





Whenever the System OFF button is pressed, the associated sources turn OFF if they are ON or remain OFF if they are OFF.

Application 5

Application 5

Application 5 provides a solid foundation of basic SC4 one-way concepts and programming.

The following features are in Application 5:

The homeowner has decided to place Vantage lighting control in their home to control the Kitchen lighting. The Kitchen has 4 separate lights.

They would also like to control the volume their Kenwood VR-5900 receiver.

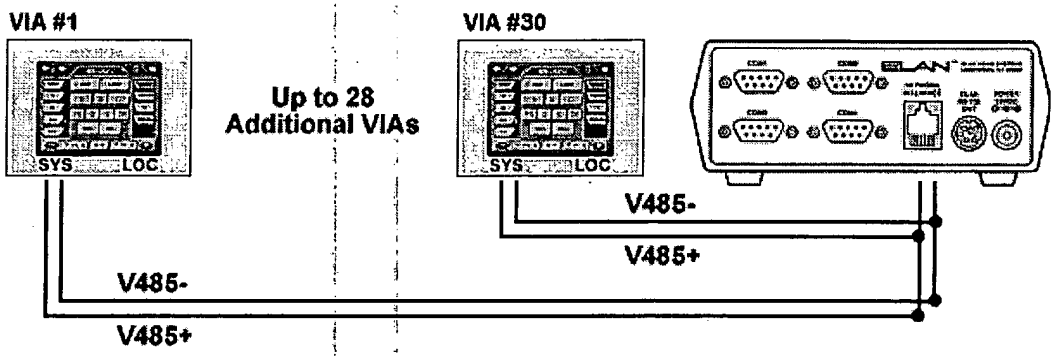
Both Vantage and VR-5900 can be controlled serially using the SC4 serial controller.

SC4 Theory

Understanding the VIA! NET Network

To control systems serially you must establish a V-NET network. The network allows the **SC4** and the **VIA!s** to communicate to one another.

A V-NET network follows:



A V-NET network can contain up to 30 VIA!s. The homeowner's system only contains two VIA!s, Kitchen and Master bedroom.

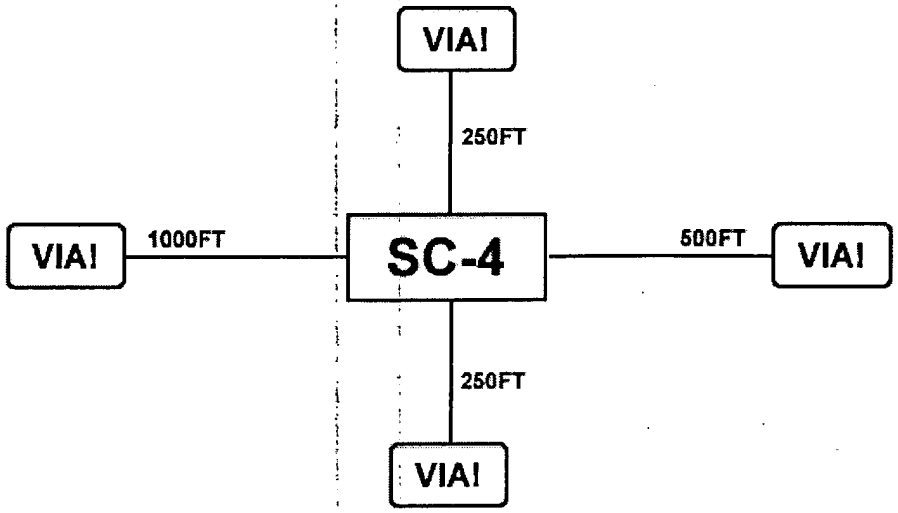
The network is a 485+ and 485- wire home run to the SC4 or a PVIA! Panel. Other wires need to be run to the VIA!s that are not shown. IE IR, power, ground etc...

The maximum length of any one wire runs between the PVIA Wall Plate and any VIA! panel is 1000 feet. The combined TOTAL length of VIA!NET wire runs can not exceed 2000 feet. . . unless you are using VIA!NET Repeaters.

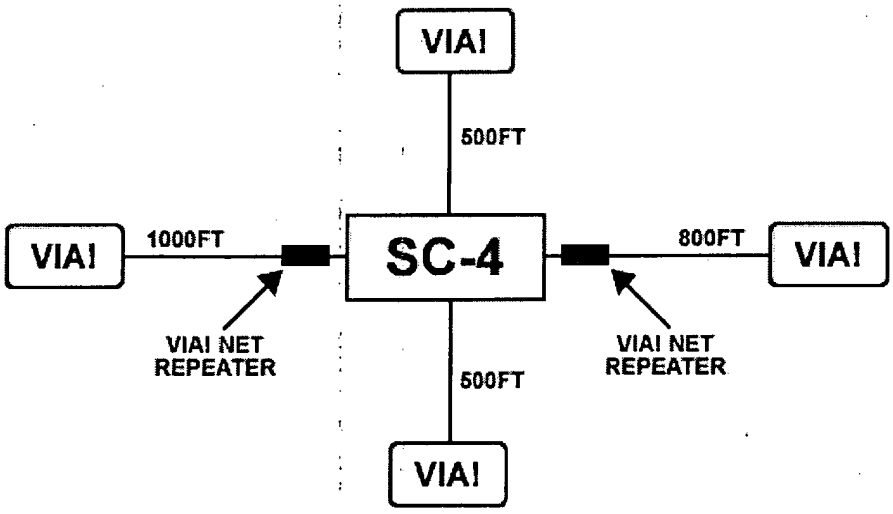
To extend the VIA!NET Network above 2000 feet, you must use VIA!NET Repeaters.

In the following example, VIA!NET Repeaters are not needed because no single wire run is over 1000 feet, and the total combined network wire run length does not exceed 2000 feet.

Application 5



In the following example, two VIA!NET Repeaters are used to divide the network into sub-nets, none of which exceed 1000 feet.



The basic formula for deciding how many VIA!NET Repeaters you need and on what wire runs they should be placed is as follows:

- Add up the total combined network wire runs.
- If it exceeds 2000 feet, place a VIA!NET Repeater on the longest wire run.
- Subtract the wire run you just installed a VIA!Net Repeater on from the previous total combined network wire runs.
- If the new remaining wire runs exceed 1000 feet total, add a second VIA!NET Repeater on the longest remaining wire run.
- Repeat steps 3 and 4 until the combined total remaining wire run lengths are less than 1000 feet.

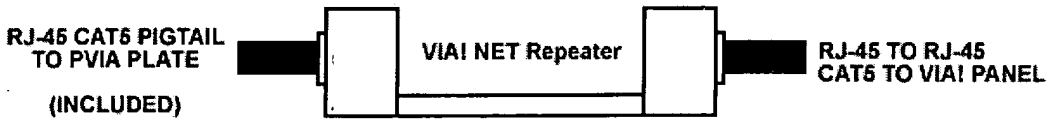
NOTE: There will never be a situation where only 1 VIA!NET Repeater is used – therefore, a minimum of 2 VIA!NET Repeaters will be used any time the total combined network wire runs exceed 2000 feet.

Using the above diagram as an example:

- Total combined network wire runs ..... 2800 ft.
- Place the 1st VIA!NET Repeater on the longest run.....-1000 ft.
- Remaining VIA!NET wire runs..... 1800 ft.
- Place a second VIA!NET Repeater on the remaining longest wire run.....- 800 ft.
- Remaining VIA!NET wire runs .....=1000 ft.
- No other VIA!NET Repeaters are necessary

VIA!NET Repeaters should be installed directly behind the PVIA! Wall Plate.

The VIA!NET Repeater has two connection points:



On one end is a RJ-45 jack which the CAT-5 wire run coming from the VIA! Touch Panels is terminated. The other end is a CAT-5 pigtail (included) that is punched down to the back of a PVIA wall plate (PVIA -1, 4 or 10) just like you would normally connect a run of CAT-5 coming from a VIA! Touch Panel.

A VIA!Repeater extends the max length of the network but can not extend a single VIA! pass 1000ft. To further understand VIA!Repeaters, please view **How and When to Utilize Repeaters** tutorial from **ELAN Home Systems**.

Analyzing the V-NET Network Broad overview

An external program, **VIA!NET Analyzer**, has been created to analyze the network. It can detect open, shorts and wire length.

SC4 and VIA! Communication Broad overview

When a button with a Serial command assigned to it is pressed, the VIA! sends the SC4, over the V-NET network, a message. The SC4 decodes this message and transmit the appropriate Serial command.

The SC4 knows what VIA! it is communicating with because each VIA! is downloaded with a **Unit ID**. When a panel is created in VIA!TOOLS an **Unit ID** is assigned on the Miscellaneous Screen in the **VIA! Unit ID** text box. You can not change this ID designator.

Understanding the SC4 Screen

Programming the SC4 Screen

Before assigning commands to a port, you need to know what port to assign the system to be controlled.

The SC4's **Comm 1** and **Comm 2** ports are **males** and **Comm 3** and **Comm 4** ports are **females**.

To ensure the correct port will be program, connect a DB9 to DB9 cable to the system to be controlled. Take the other end of the cable and connect it to the SC4. If the SC4's end of the cable needs to be connected to a male connector but bother male connectors are being used, you must use a null modem gender bender. A null modem gender bender establishes proper wire configuration.

Connect a DB9 DSUB connector from the **Vantage** system to the **SC4**.

The **Vantage** is connected to **Comm 1** on the SC4.

Connect a DB9 DSUB connector from the **Kenwood** receiver to the **SC4**.

The **Kenwood** is connected to **Comm 3** on the SC4.

Connections must be made **Male to Female** or **Female to Male**. If you try to connect the SC4 to a system and it is **Male to Male** or **Female to Female**, you must use a **NULL Modem Gender Bender**.

This is important. If you use a regular **Gender Bender**, you will not have control over the system.

Null Modem gender benders can be found at **RadioShack**.

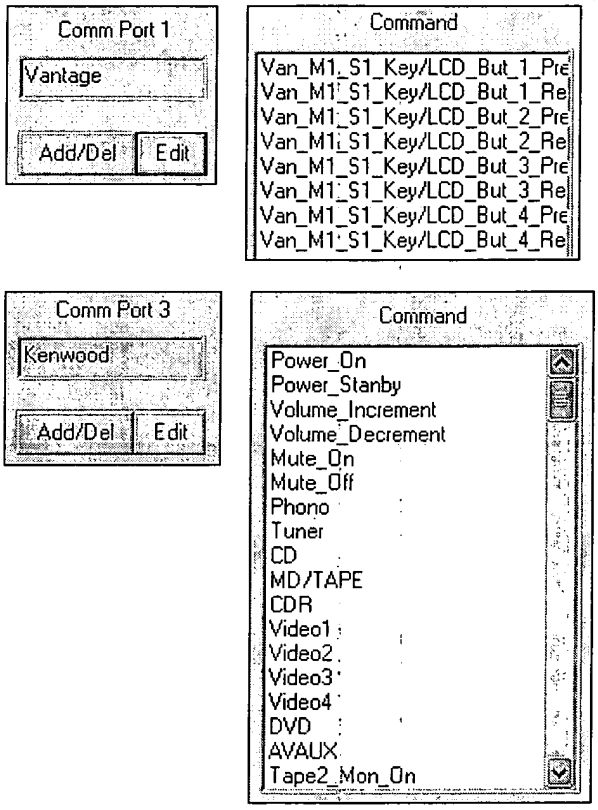
Add Keypad Master 1, Station 1, Button 1 thru 8, Press and Release commands using a Serial Driver Wizard.

- **Add a Serial Driver Wizard.** See PG **42**.

Add the **Kenwood prewritten serial driver**.

- **Add a Pre-Written Serial Driver** See PG **42**.

These commands are added to Comm 1 and Comm 3.



Checking Port Settings

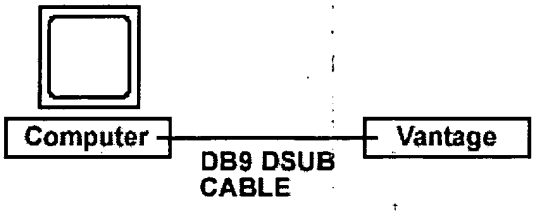
Port Settings tells the SC4 how to send the serial commands to the system to be controlled. Each manufacture of the system to be controlled publishes a protocol. The protocol lists the BAUD Rate, Stop Bits, Parity, Byte Size and the serial configuration. The SC4 port settings must be programmed according to the manufactures protocol.

- **Edit Comm Port Settings.** See PG **42**.

Testing Serial Commands

Testing serial commands bypasses the SC4 and V-NET network. This ensures the commands you assign to VIA! function buttons will control the system. A **DB9 DSUB** cable is connected from your **computer's communication** port to the **system** to be controlled.

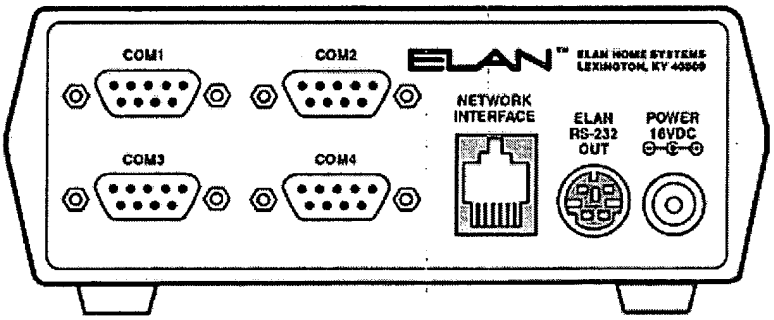
Testing serial commands is a great troubleshooting aid. Suppose a system is wired and programmed and everything works except a few serial commands. To troubleshoot the problem, test the serial commands. Testing serial commands bypasses VIA!s, VIA!NET network and the SC4. If the commands work from testing, a VIA! programming problem exists. If the commands do not work from testing, a problem exists with the equipment to be controlled or the serial commands themselves.



- **Test serial commands.** See PG **43**.

Understanding System Serial Commands

ELAN manufactures a **MCU**, **SR1** and **Z880** that can be controlled by serial commands. These serial commands are transmitted out the **ELAN RS-232 OUT** connector.

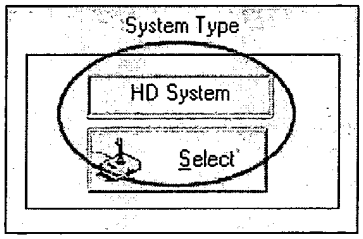


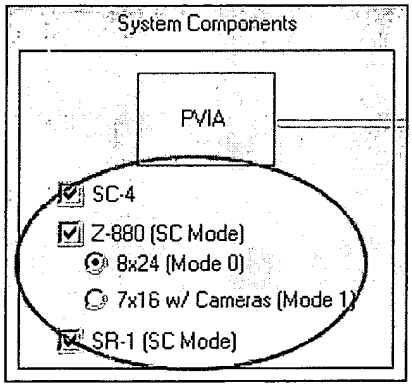
The **SC4** checkbox has to be checked on the **System Screen**.

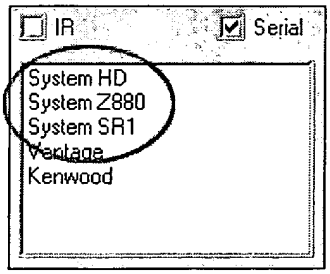
If **HD System Type** is selected on the **System Screen**, you will see **System HD** serial command set.

If the **Z880** checkbox is checked on the **System Screen**, you will see **System Z880** serial command set.

If the system **SR1** checkbox is checked on the **System Screen**, you will see **System SR1** serial command set.







The word **System** identifies the Serial commands are going to be transmitted out the **SC4's ELAN RS-232 OUT** connector.

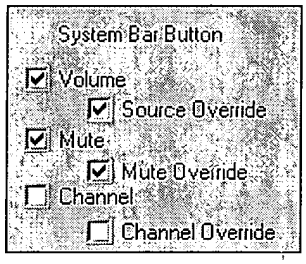
If you do not see a **System** you want to use, ensure the correct selections are made on the **System Screen**.

Programming VIA! buttons with serial commands

Open the homeowner's project and select the Kitchen panel in the 1st Floor zone.

The homeowner would like to control the VR5900 receiver when the Tuner source button is selected. To do this, we need to select **Volume source override** and **Mute source override** on the **Layout Screen**. This will allow us to program non-ELAN commands.

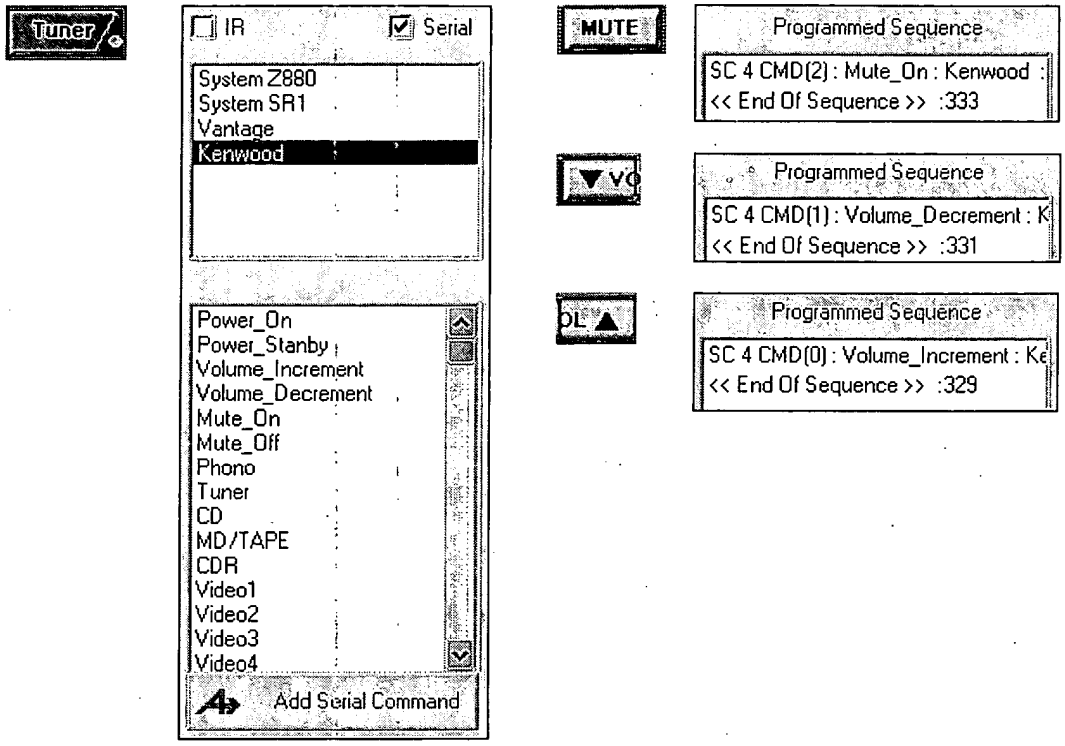
- **Enable Source Override for System Bar Buttons.** See PG **61**.



Assigning Serial Commands to the System Bar Buttons

Assigning serial commands to buttons is like assigning IR commands to buttons. Assign Kenwood commands to function buttons.

- **To assign serial commands to the Kenwood function button** See PG **81**.



NOTE: **System Z880**, **System SR1**, **Vantage** and **Kenwood** are the only serial commands that can be chosen. This is because they are the only commands programmed on the **SC4 Screen** and **System Screen**.

You have to understand what action the serial command will perform when the button is pressed.

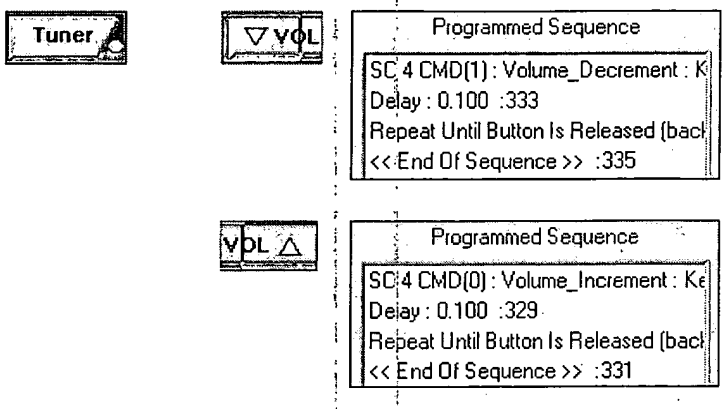
When the **Volume Up** button is pressed, the Kenwood Volume Increment command is sent to the Kenwood receiver. The Kenwood receiver increments the volume by 1%. You will have to repetitively press the volume up button to increase the volume.

This is undesirable. We want to be able to press and hold this button and hear the volume ramp up.

ELAN has created a new sequence (**Repeat Last Step Until Button Release**) that will accomplish a ramp up when the button is pressed and held.

- **Add an Edit Sequence command to a button** See PG **26**.

A delay is automatically inserted. The delay determines how fast the volume ramps. A large delay will give a slow ramp. A short delay will give a fast ramp. The default is .1 second.



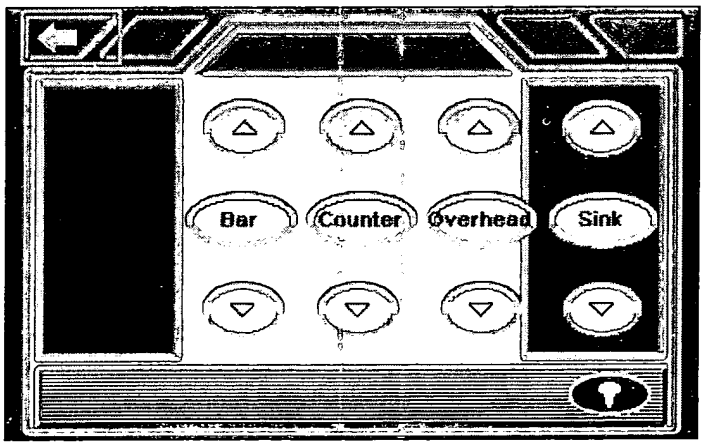
When the Volume Up button is pressed and held, the **Volume Increment** serial command is transmitted to the receiver and the volume increases from 21% to 22%. The VIA! **delays** for .1 second. The next command is **Repeat Until Button Is Released (back two steps)**.The VIA! asks, "**Is the button still being pressed?**" if it is, jump back 2 steps and perform it. Two steps back is the Volume Increment command. The **volume increments** from 22% to 23%. This continues until the button is released. When the button is release, the VIA! executes the **End Of Sequence** step.

You have to have a command between the Serial command and the Repeat Until Button Is Released (back two steps) command. The command does not have to be a delay, it just has to be something.

If you do not have a command between the two, the VIA! jumps back two steps to a End Of Sequence from a different button. When this happens the VIA! increments the volume from 21% to 22% and then quits.

Programming the Lights Function Page

Program the Lights function page to resemble the following illustration.



- **Add a Light Function page.** See PG **60**.
- **Add a Function Button to the VIA!.** See PG **61**.

In Lighting systems, the same serial command can perform several different functions. **Button 1 Press** serial command can turn all the lights in the house on. It could turn only the Bedroom light on the 10%. Depending how the lighting system is programmed, **Button 1 Press** serial command can do several different functions.

You have to understand what action the serial command will perform when the button is pressed.

The homeowner wants to be able to ramp each light in the Kitchen. To accomplish this, program Vantage's QLINK program to perform the following:

Raise the **bar lights** when it receives a **Button 1 Press** and stops when it receives a **Button 1 Release**.

Lower the **bar lights** when it receives a **Button 2 Press** and stops when it receives a **Button 2 Release**.

Raise the **counter lights** when it receives a **Button 3 Press** and stops when it receives a **Button 3 Release**.

Lower the **counter lights** when it receives a **Button 4 Press** and stops when it receives a **Button 4 Release**.

Raise the **overhead lights** when it receives a **Button 5 Press** and stops when it receives a **Button 5 Release**.

Lower the **overhead lights** when it receives a **Button 6 Press** and stops when it receives a **Button 6 Release**.

Raise the **sink lights** when it receives a **Button 7 Press** and stops when it receives a **Button 7 Release**.

Lower the **sink lights** when it receives a **Button 8 Press** and stops when it receives a **Button 8 Release**.

- **To Program the Vantage commands** See PG **81**.

NOTE: Contact **Vantage** to obtain their **QLINK** programming and to learn how to program their system.

Programmed Sequence

LCD_But_1_Press : Vantage :338
LCD_But_1_Release : Vantage :339

All of the button programming is similar to the above.

When the button is pressed, **Button 1 Press** is sent to Vantage. Vantage starts to raise the **bar lights**. VIA! sends **Button 1 Release** to Vantage. Vantage stops the light. This occurs extremely fast. The bar light may look as if it did not rise.

This is undesirable. We want to be able to press and hold this button and see the lights ramp up.

ELAN has created a new sequence (**Wait Until Button Released**) that will accomplish a ramp up when the button is pressed and held.

Bar

Programmed Sequence

]: Van_M1_S1_Key/LCD_But_1_Pres
tton Is Released :339
: Van_M1_S1_Key/LCD_But_1_Rele
equence >> :341

Overhead

Programmed Sequence

]: Van_M1_S1_Key/LCD_But_5_Pres
ton Is Released :367
]: Van_M1_S1_Key/LCD_But_5_Rele
quence >> :369

Programmed Sequence

]: Van_M1_S1_Key/LCD_But_2_Pres
utton Is Released :347
]: Van_M1_S1_Key/LCD_But_2_Rele
equence >> :349

Programmed Sequence

]: Van_M1_S1_Key/LCD_But_6_Pres
on Is Released :363
]: Van_M1_S1_Key/LCD_But_6_Rele
quence >> :365

Counter

Programmed Sequence

]: Van_M1_S1_Key/LCD_But_3_Pres
utton Is Released :343
]: Van_M1_S1_Key/LCD_But_3_Rele
equence >> :345

Sink

Programmed Sequence

]: Van_M1_S1_Key/LCD_But_7_Pres
ton Is Released :359
]: Van_M1_S1_Key/LCD_But_7_Rele
quence >> :361

Programmed Sequence

]: Van_M1_S1_Key/LCD_But_4_Pres
utton Is Released :351
0]: Van_M1_S1_Key/LCD_But_4_Re
equence >> :353

Programmed Sequence

]: Van_M1_S1_Key/LCD_But_8_Pres
on Is Released :355
]: Van_M1_S1_Key/LCD_But_8_Rele
quence >> :357

- **Add an Edit Sequence command to a button** See PG **26**.

The **Wait Until Button Released** command is placed between the **Press** and **Release** commands.

When the **Bar** raise button is pressed and held, the VIA! executes **Button 1 Press**. Vantage starts to raise the Bar lights. Next, the VIA! executes **Wait Until Button Released**. The VIA! asks, "**Is the button still being pressed?**" If it is, stay on the

Wait Until Button Released command and keep asking if the button is being pressed. When the button is released the VIA! will execute **Button 1 Release** and the light stops ramping.

Understanding Conversion tables

VIA!s do not store serial commands. They store a conversion table that is a subset of a larger table in the SC4.

Conversion tables are downloaded to the VIA! when you download to a VIA! and when you download to a SC4.

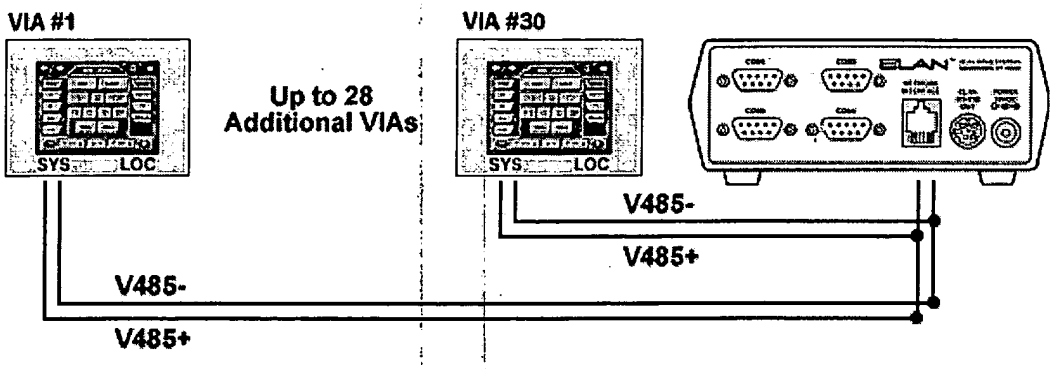
Currently, the **Kitchen** panel has the following conversion table.

- **To calculate conversion tables** See PG **15**.

Conv Tab	SC-4	Device/Command name
0	339	Kenwood Volume_Increment
1	340	Kenwood Volume_Decrement
2	341	Kenwood Mute_On
3	321	Vantage Van_M1_S1_Key/LCD_But_1_Press
4	322	Vantage Van_M1_S1_Key/LCD_But_1_Release
5	323	Vantage Van_M1_S1_Key/LCD_But_2_Press
6	324	Vantage Van_M1_S1_Key/LCD_But_2_Release
7	325	Vantage Van_M1_S1_Key/LCD_But_3_Press
8	326	Vantage Van_M1_S1_Key/LCD_But_3_Release
9	327	Vantage Van_M1_S1_Key/LCD_But_4_Press
10	328	Vantage Van_M1_S1_Key/LCD_But_4_Release
11	335	Vantage Van_M1_S1_Key/LCD_But_8_Press
12	336	Vantage Van_M1_S1_Key/LCD_But_8_Release
13	333	Vantage Van_M1_S1_Key/LCD_But_7_Press
14	334	Vantage Van_M1_S1_Key/LCD_But_7_Release
15	331	Vantage Van_M1_S1_Key/LCD_But_6_Press
16	332	Vantage Van_M1_S1_Key/LCD_But_6_Release
17	329	Vantage Van_M1_S1_Key/LCD_But_5_Press
18	330	Vantage Van_M1_S1_Key/LCD_But_5_Release

The **SC4 conversion table** consists of all **System Z880**, **System SR1** and the **above commands**. There are too many SC4 commands to show the SC4 conversion table.

Each button in VIA!TOOLS is assigned a button number. When a button with a serial command is pressed, the VIA! looks this number up in the VIA!s conversion table and is transposed to a SC4 number. This number is sent to the SC4 over the V-NET network.



When VIA!TOOLS downloads to the SC4 and VIA!TOOLS, it calculates a checksum based on the VIA!'s conversion table and the SC4's conversion table. This checksum is stored in both the SC4 and VIA!.

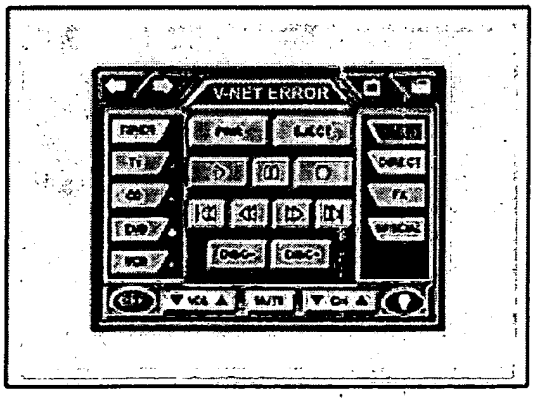
SC4 and VIA! communication detailed overview

Pressing the **MUTE** button:

The **Kenwood Mute** button is assigned button number **2**. This number can not be seen in VIA!TOOLS. VIA!TOOLS assigns this number automatically.

When a **Kenwood Mute** button is pressed the VIA! asks the **SC4** what it's checksum. The **SC4** sends it's checksum to the **VIA!**. If the **VIA!'s** checksum and the **SC4's** checksums are the same, VIA!TOOLS looks number **2** up in its conversion table and transposes it to **341**. **341** is sent to the SC4 over the V-NET network. **341** is looked up in the SC4's conversion table and the actual mute serial command is transmitted out the appropriate communication port.

If a serial button is pressed and the checksums do not match, a **V-NET ERROR** is displayed in the VIA!'s **Message Bar** and in-turn the VIA! does not send the button's number to the SC4. If the SC4 does not receive the button number it does not respond to a button press.



A V-NET ERROR could also occur if the V-NET network wires are open or shorted, if the SC4 is not powered up or if the conversion tables do not match.

Downloading

Download to the VIA!s

We have programmed the **SC4 Screen** and programmed the **Kitchen** VIA! with Light function buttons and Kenwood commands. We now have to download to the VIA!s. Downloading to the VIA!s will update the new **light page function buttons**, **Kenwood commands** and the **Conversion table**.

- **To download to the VIA!** See PG **89**.

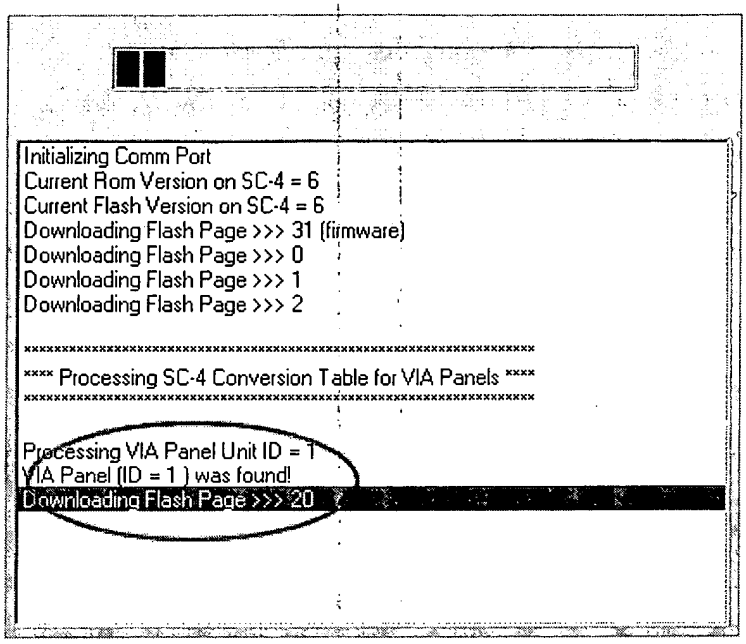
Download to the SC4

Transferring to the SC4 will program the SC4 with **Comm Port settings**, **Serial Commands** and it's **Conversion Table**.

Before downloading to the SC4, all VIA!s must be connected to the V-NET network. This will ensure the SC4 finds the VIA!s on the network.

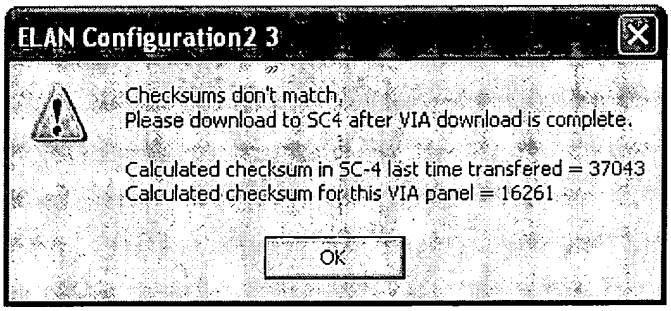
- **To download to the SC4** See PG **43**.

After VIA!TOOLS transfers the **Comm Port settings**, **Serial Commands** and it's **Conversion Table**, it looks for all VIAs on the V-NET network. When a VIA! is found on the V-NET network, the SC4 updates the VIA!'s conversion table.



The **SC4's download** ensures the **Conversion tables** have the same **checksum**.

Whenever you see a **Checksums do not Match** error, continue downloading to the VIA! and then download to the SC4. The SC4 download updates all VIA!'s conversion table to the correct checksums.



VIA! NET Analyzer Detailed Overview

Since the SC4 and VIA's have been downloaded, you must run VIA! NET Analyzer.

The VIA! NET Analyzer checks the integrity of the V-NET network wires (485+ and 485-wires) to each VIA!.

Each VIA! must be downloaded to at least once. This will assign VIA!s a Unit ID that allow the SC4 to query them.

The SC4 queries each **Unit ID** or VIA!.

If the VIA! answers for each query, the SC4 knows the V-NET network to this VIA! is intact.

If the VIA! does not answer any of the queries, the SC4 knows the wires are open or shorted.

If the VIA! answers 60% of the queries, the SC4 knows that the wire length is too long or the data is being interfered with.

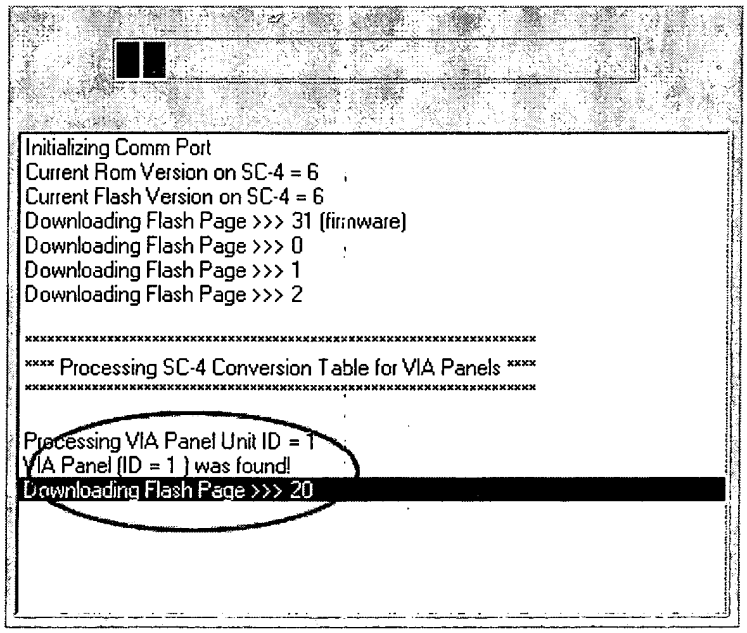
To Execute VIA! NET Analyzer

- Select **VIA! NET Analyzer** from the **Tools** menu.
- Click **Quick Scan**.
- Perform troubleshooting steps that are listed in the **System Status Messages** text box.
- Click the **Full scan** button.
- Perform troubleshooting steps that are listed in the **System Status Messages** text box.

Check the functionality of the VIA!

After all Unit IDs check good, Serial programming is complete. Press buttons on the VIA! to control the equipment. If a **V-NET ERROR** message appears in the VIA!'s Message box:

- Run VIA! NET Analyzer to ensure wire integrity.
- Ensure the SC4 has power.
- **Download to the SC4** (See PG **43**) again with the **Update SC4 Conversion Tables on VIA! Panels** checkbox checked and ensure all Unit IDs are found and the flash page updates.



Application 6

Application 6

Application 6 discusses two-way serial control over the HAI, APEX and APRILAIRE systems.

Applications 1 through 5 utilize a fictitious customer, a homeowner. This application does not use the homeowner as an example.

Prior to beginning this application, you will need to have a good grasp of **Application 5**.

The following features are in Application 6:

Screen Layout See PG **189**.

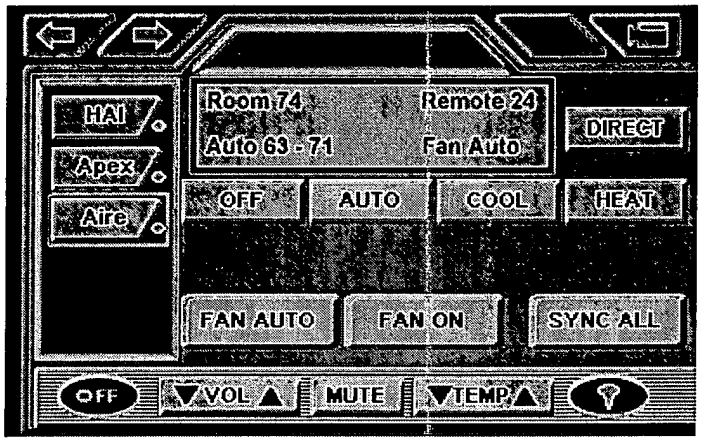
HAI's web page: **www.homeauto.com**

Apex's web page: **www.ademco.com/apex**

Aprilaire's web page: **www.aprilaire.com/default.asp**

VIA! Feedback area

The following is the VIA!'s feedback area:



Add a Two-Way HAI driver

Parts required:

Omni **or**

Omni LT **or**

Omni 2 **or**

Omni Pro **or**

Omni Pro 2

11A00-2 Keypad **or**

11A00-9 Keypad **or**

15A00 Keypad

Application 6

B & B Electronics RS232 to RS422/485 Optical Isolated Converter Model 4850T9L

Theory

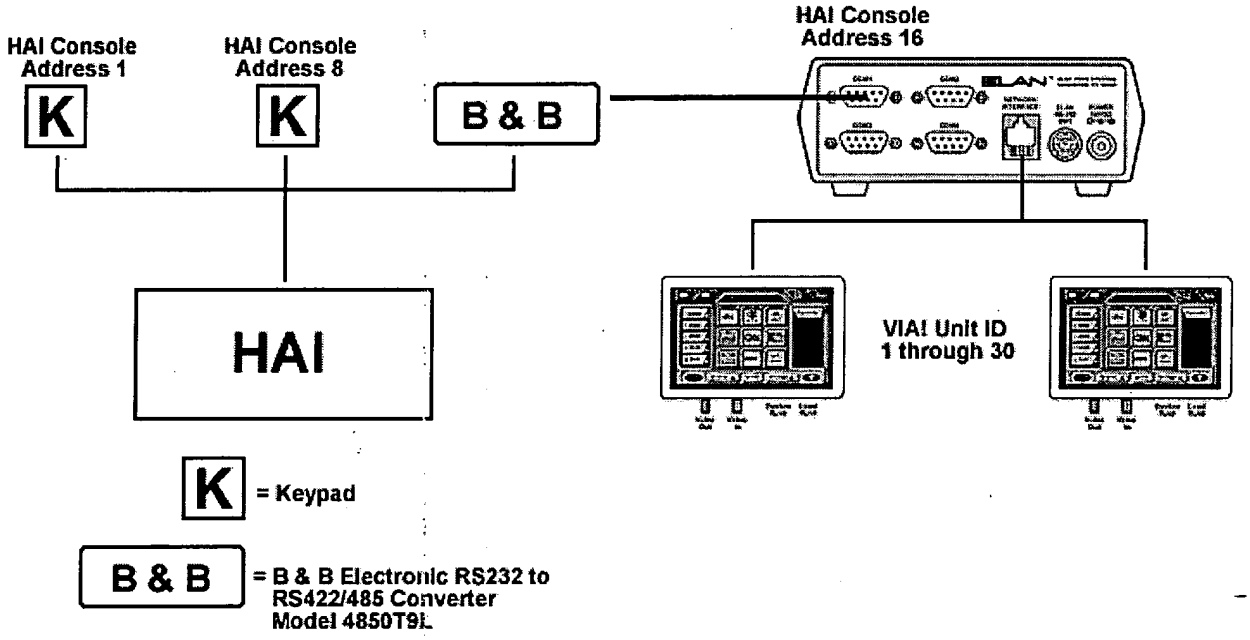
Each HAI system contains a maximum number of **Console Addresses**. These Console Addresses are different from the VIA!s Unit IDs.

No two HAI keypads can have the same Console Address.

Omni LT can have a maximum of **4 Console Addresses**.

Omni and **Omni 2** can have a maximum of **8 Console Addresses**.

Omni PRO and **Omni PRO 2** can have a maximum of **16 Console Addresses**.



The above illustration shows an HAI system with 16 Keypad/Console Addresses.

The **16th** keypad is **SC4 Comm Port #1**.

All **VIA!s** on the **VIA! Net Network**, have **HAI Console Address #16**.

HAI keypads must have **different Console Addresses** but since there are up to 30 VIA!s on a VIA! Net Network, all **VIA!s** are **HAI Console Address #16**.

NOTE: If VIAs need to have a different HAI Console Address, assign a second HAI Console Address to a different comm port. Some VIA!s will use the original assigned HAI comm port and some VIA!s will use the second assigned HAI comm port.

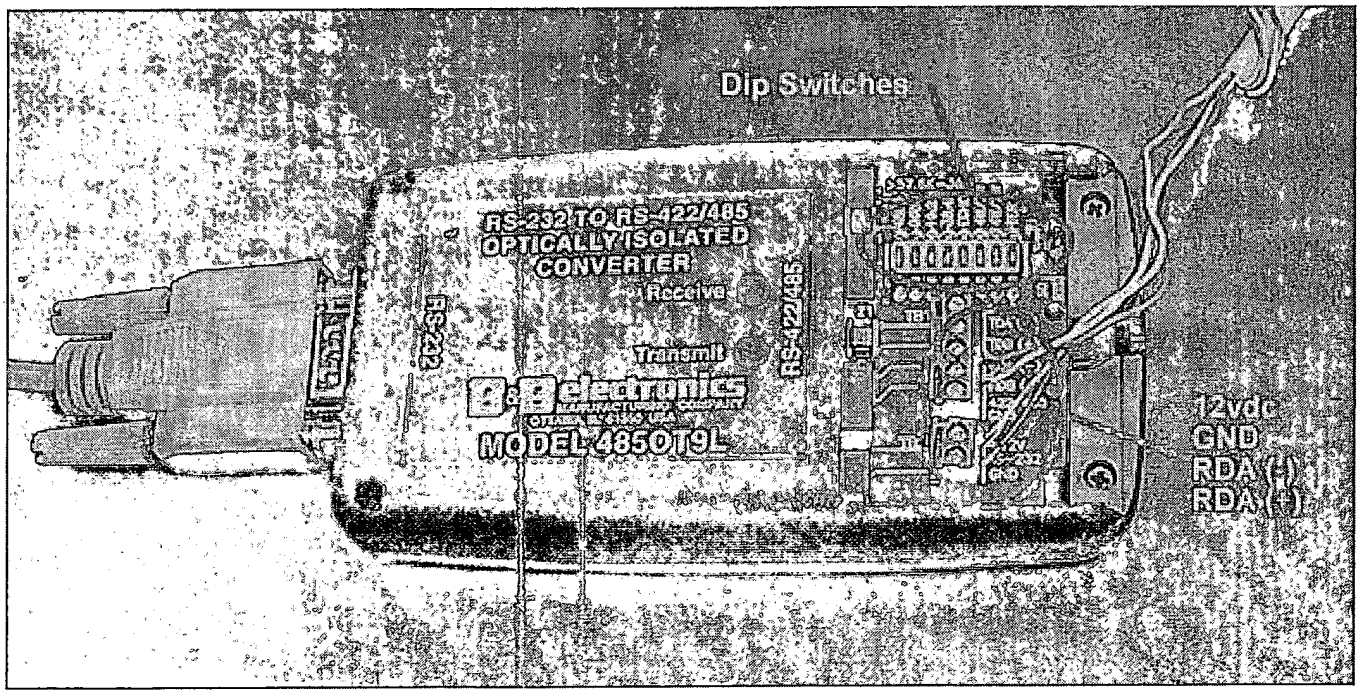
NOTE: Any comm port can be used if the appropriate comm port wire configuration is adhered to.

Wiring HAI to B&B Model 4850T9L to SC4

HAI contains either a Red (12vdc), Black (GND), Yellow (A) and Green (B) connection or a 12vdc, GND, A or B connection.

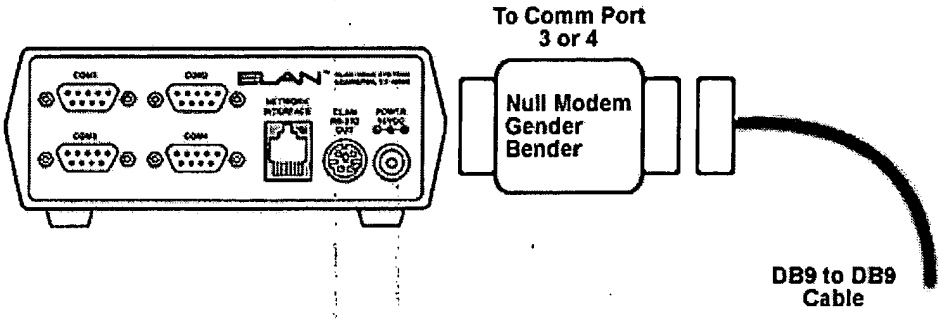
HAI	B&B Electronics
12vdc (Red)	12vdc
GND (Black)	GND
(A) (Yellow)	RDB (+)
(B) (Green)	RDA (-)

NOTE: HAI (A) is wired to RDB(+) and HAI (B) to RDA (-). This is not a typographical error.



Connect the DB9 to DB9 cable from the RS232 to RS422/485 Optical Isolated Converter to either Comm **1** or **2** of the SC4's.

NOTE: Any comm port can be used if the appropriate comm port wire configuration is adhered to. Use a Null Modem Gender Bender if using comm ports **3** or **4**.



Jumper:

Place the **SD RTS** jumper in the **SD** position.

Dip Switches are either off or on. **On** is positioned **up** and **off** is positioned **down** in reference to the above illustration.

Dip Switches:

4800	OFF
9600	ON
19.2K	OFF
38.44K	OFF
ECHO	OFF
4W/2W	ON
4W/2W	ON
TERM	OFF

Configure HAI

ELAN Home Systems requires at least one HAI keypad installed and operable prior to connecting a SC4/VIA!.

Refer to HAI Installation manual to ensure proper setup and to ensure the proper Console Addresses are assigned to the keypads.

Feedback Information

The VIA! displays the same information HAI's keypads display. See HAI's Installation and Owners manual for feedback information.

Programming

Ensure to enable SC4 programming.

- **To enable SC4 programming** See PG **36**.

Add a HAI Two-Way Driver.

- **To add a HAI Two-Way Driver** See PG **43.**

Download to the SC4.

- **To download to the SC4** See PG **43**.

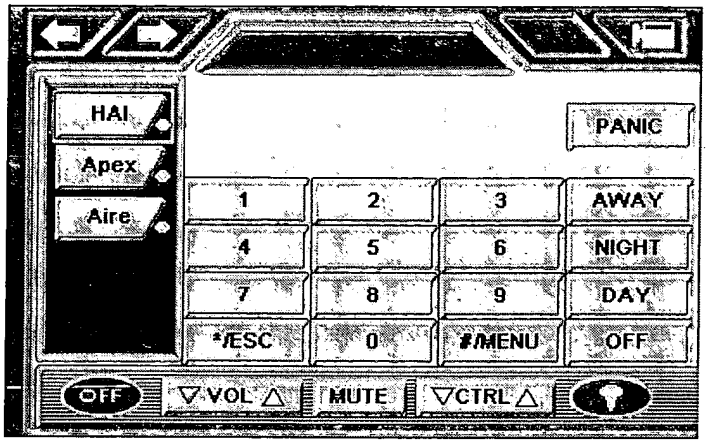
Add a HAI Two-Way Source button.

- **To add a HAI Two-Way Source button** See PG **55**.

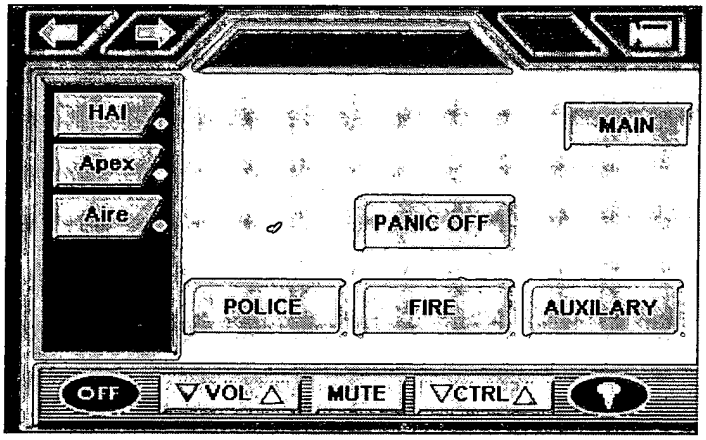
- **To download to the VIA!** See PG **89**.

NOTE: If the VIA! does not show feedback, recycle power on the SC4 and the HAI system.

Screen Layout



Pressing the **PANIC** button will display the **Panic Screen**. From here three panic states can be selected. When pressed, that specific panic is executed. If the **Panic Off** button is pressed, the VIA! automatically jumps to the above screen to allow the password to be entered.



Add a Two-Way Apex driver

Parts required:

Destiny 6100

Apex RS232 Interface board (This board attaches directly to the 6100.)

RJ11 to DB9 transition adaptor (provided with the RS232 Interface board)

RJ11 to RJ11 cable (provided with the RS232 Interface board)

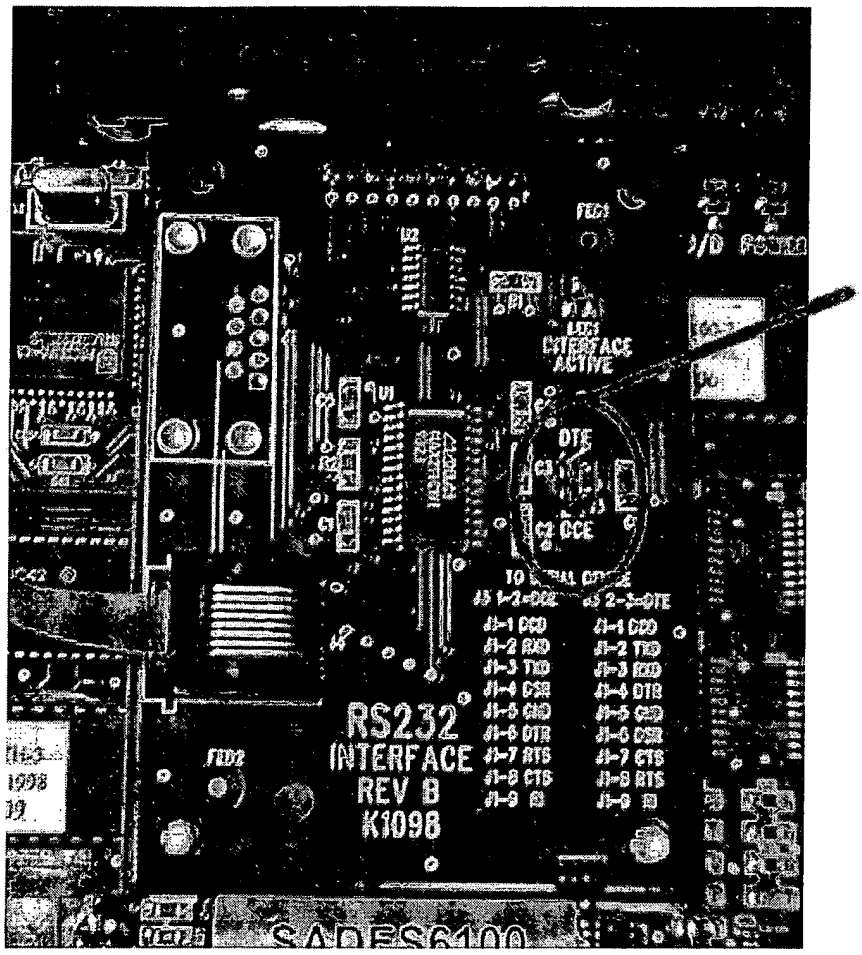
Any Apex Keypad

DB9 to DB9 cable

Wiring the Destiny 6100 to the SC4

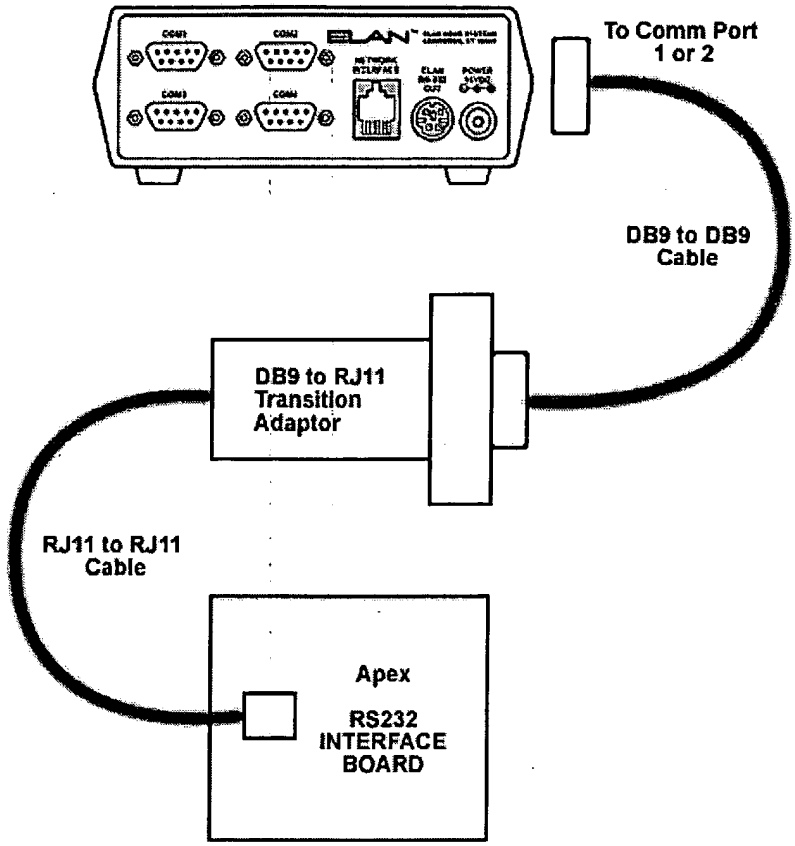
Attach the **RS232 Interface board** to the **Destiny 6100**.

Set **J3** jumper on the **RS232 Interface board** to **DCE**.

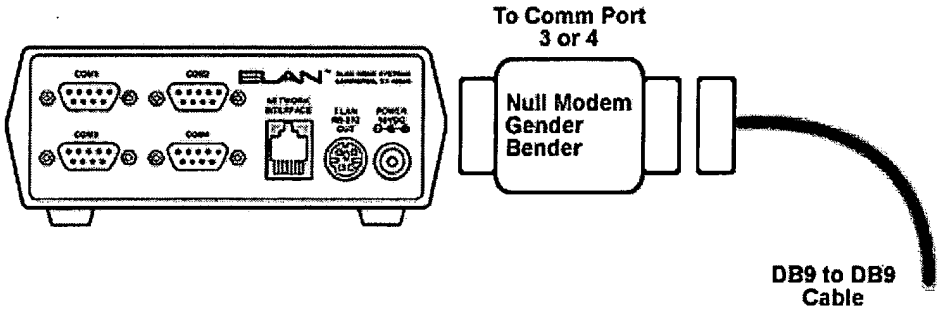


Connect a **RJ11** from the **RS232 Interface board** to the **RJ11 to DB9** transition connector. This converter is supplied with the RS232 Interface board.

Connect a **DB9 to DB9** cable from the **RJ11 to DB9 converter** to either **comm 1** or **comm2** of the SC4.



NOTE: Any comm port can be used if the appropriate comm port wire configuration is adhered to. Use a Null Modem Gender Bender if using comm ports **3** or **4**.



NOTE: Do not use a **RJ45 to RJ45** cable to connect the **DB9 to RJ11 Transition Connector** to the **RS232 Interface Board**. You must use the supplied **RJ11 to RJ11** cable.

Configure Apex

ELAN Home Systems requires at least one Apex keypad is installed and operable prior to connecting a SC4/VIA! to APEX.

Refer to Apex Installation manual to ensure proper setup.

Use **Apex's Demo RS232** program to verify serial communication.

Programming

Prior to programming the VIA! and SC4, ensure Apex's keypad controls the Destiny 6100 and ensure serial communication verification with **Apex's Demo RS232** program.

RS232 communication needs to be enabled:

On Apex's keypad press **9173** to enter programming mode.

Press **0155 009** to enable RS232 communication.

Press **9899** to exit programming mode.

Enable zone status to automatically be sent out the RS232 interface.

On Apex's keypad press **9173** to enter programming mode.

Press **0430 016** to Report zone open.

Press **0431 016** to Report zone closed.

Press **0409 144** to Report zone disarm.

Press **0411 144** to Report zone arm.

Press **9899** to exit programming mode.

Ensure to enable SC4 programming.

- **To enable SC4 programming** See PG **36**.

Add an APEX Two-Way Driver.

- **To add a APEX Two-Way Driver** See PG **43.**

Download to the SC4.

- **To download to the SC4** See PG **43**.

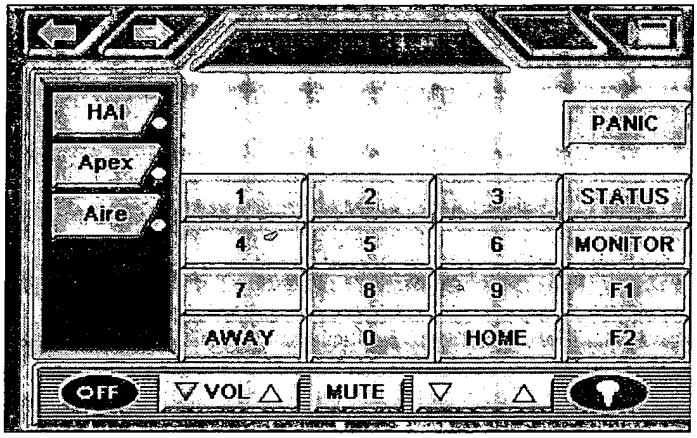
Add a APEX Two-Way Source button.

- **To add a HAI Two-Way Source button** See PG **55**.

- **To download to the VIA!** See PG **89**.

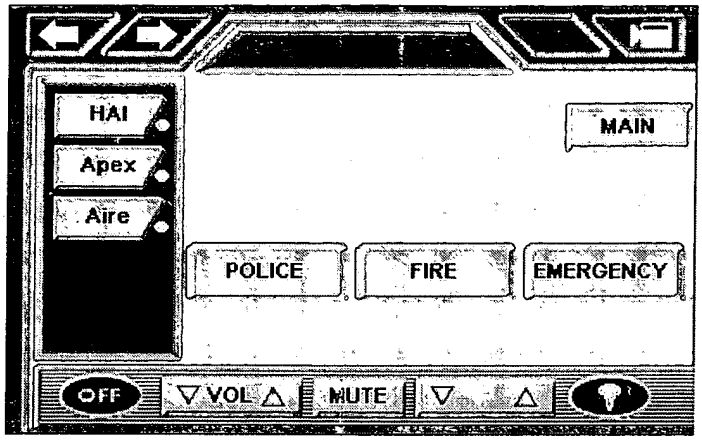
NOTE: If the VIA! does not show feedback, recycle power on the SC4 and the APEX system.

Screen Layout



Pressing the **PANIC** button will display the **Panic Screen**. From here three panic states can be selected. When pressed, that specific panic is executed. Press the **Main** button to Jump to the above screen to enter the password.

Application 6



Add a Two-Way Aprilaire driver

Parts required:

8870 Keypads

8811 Protocol Adaptor

8818 Distribution Panel

RJ-11 to DB9 transition adaptor (provided with the protocol adapter)

RJ11 to RJ11 cable (provided with the protocol adapter)

DB9 to DB9 cable

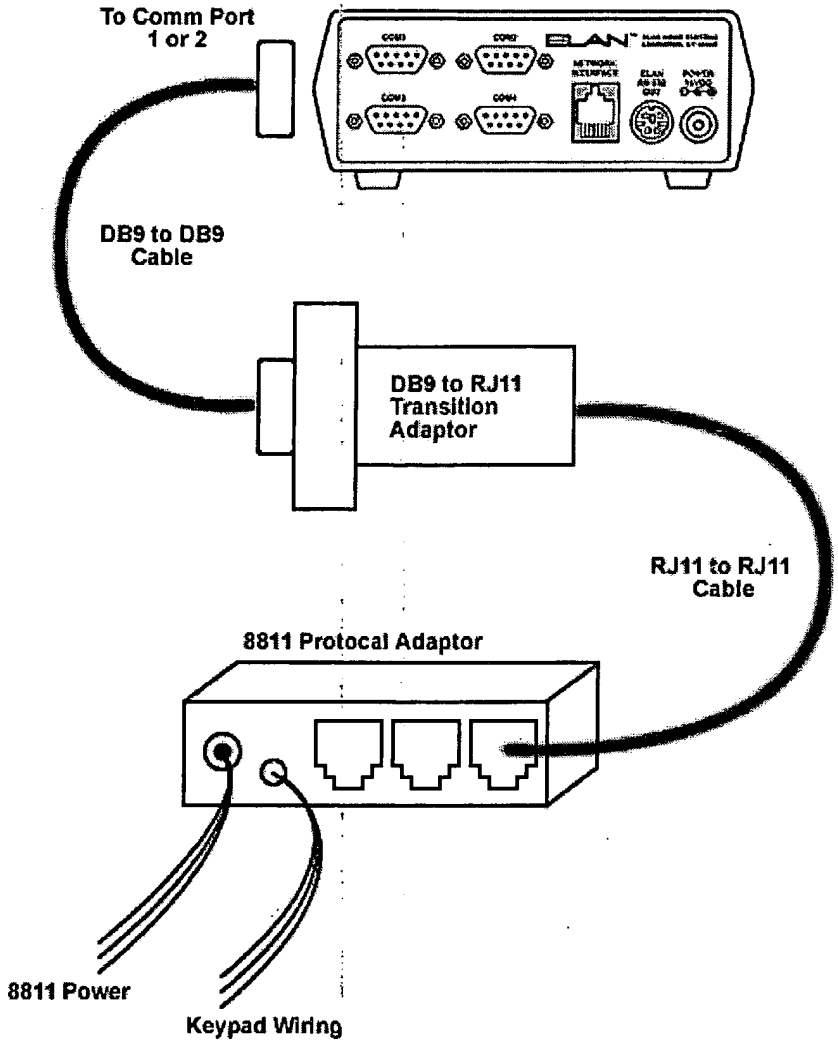
Wiring the Aprilaire to the SC4

Refer to Aprilaire's **Communicating Thermostat System Installation Manual** for proper wiring configuration.

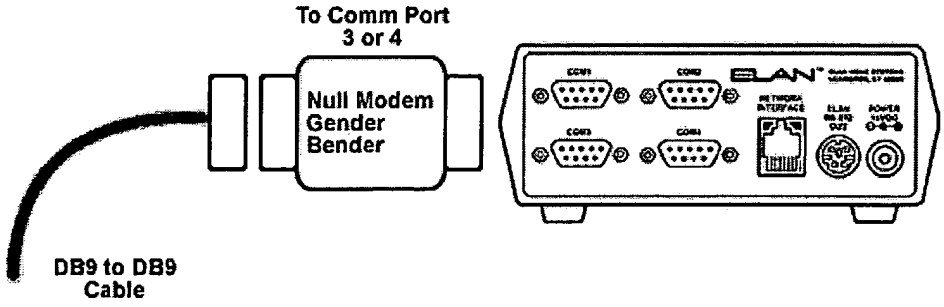
Connect a **DB9** to **DB9** communication cable from the **RJ-11** to **DB9 Transition Adaptor** to SC4's communication port **1** or **2**.

Connect a **RJ11** to **RJ11** cable from the **RJ-11** to **DB9 Transition Adaptor** to Aprilaire's **8811 Protocol Adaptor**.

Application 6



NOTE: Any comm port can be used if the appropriate comm port wire configuration is adhered to. Use a Null Modem Gender Bender if using comm ports **3** or **4**.



Configure Aprilaire

ELAN Home Systems requires at least one Aprilaire keypad installed and operable prior to connecting a SC4/VIA! to Aprilaire.

Refer to Aprilaire's **Communicating Thermostat System Installation Manual** for proper programming

Programming

Ensure to enable SC4 programming.

- **To enable SC4 programming** See PG **36**.

Add a APRILAIRE Two-Way Driver.

- **To add a APRILAIRE Two-Way Driver** See PG **43.**

Download to the SC4.

- **To download to the SC4** See PG **43**.

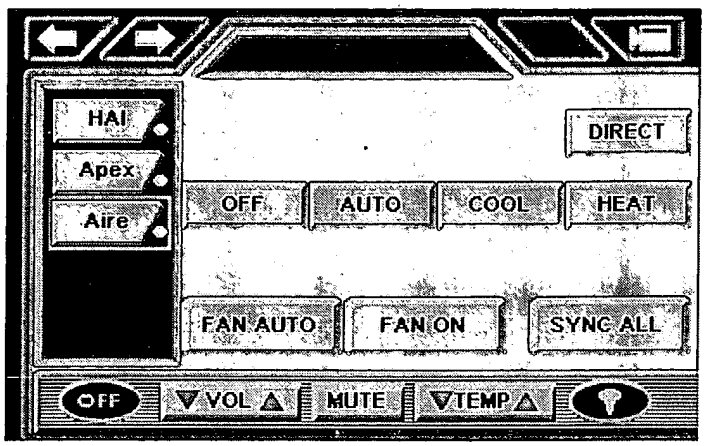
Add a APRILAIRE Two-Way Source button.

- **To add a APRILAIRE Two-Way Source button** See PG **55**.

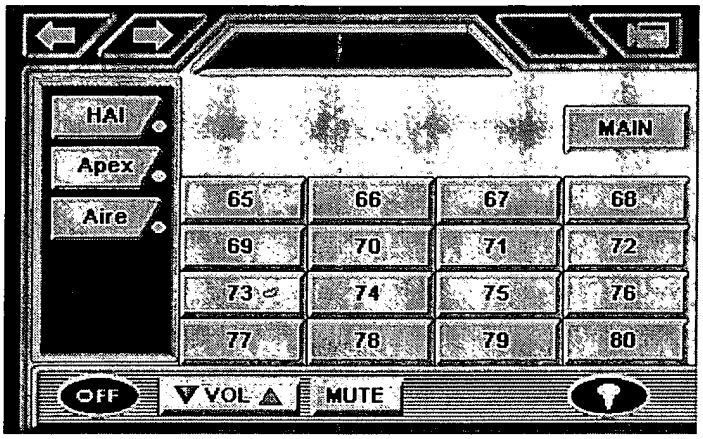
- **To download to the VIA!** See PG **89**.

NOTE: If the VIA! does not show feedback, recycle power on the SC4 and the Aprilaire system.

Screen Layout



Pressing the **DIRECT** button will display the **Direct Access Temperature Screen**. From here the temperature can be changed by pressing a single button.



Application 7

Application 7

Application 7 discusses the Multi Zone Feature.

Applications 1 through 5 utilize a fictitious customer, a homeowner. This application does not use the homeowner as an example.

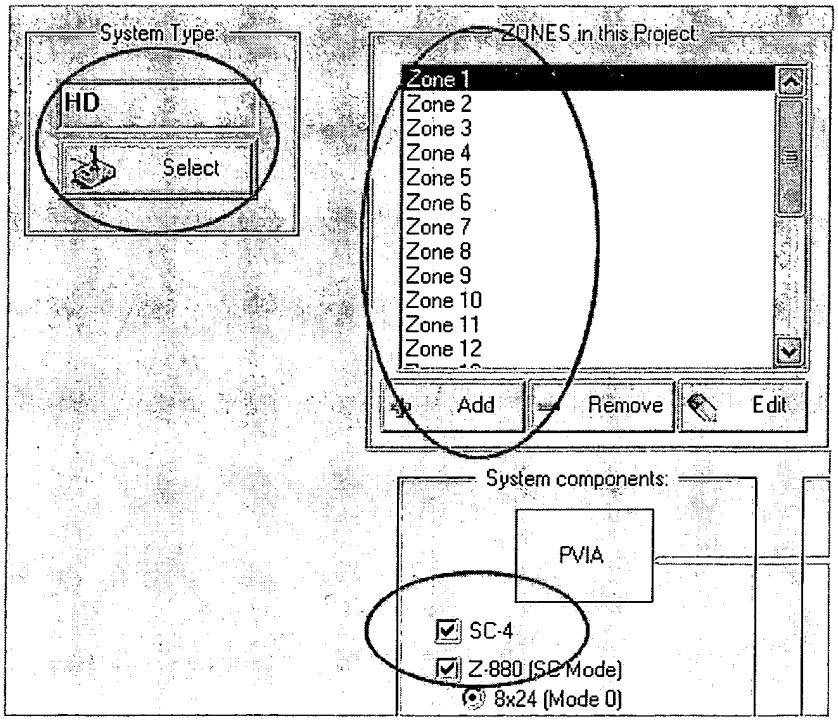
Prior to beginning this application, you will need to have a good grasp on **Application 5**.

HD Multi Zone Feature

Use this feature to automatically build a source button that allows the end user to control **Audio selection**, **DND** (Do Not Disturb), **Volume**, **Mute** and **Zone OFF** in different zones.

You must use a **SC4** and select **HD** as the **System Type** to use this feature. Ensure all zones to be controlled are created in the **ZONES in this Project** text box.

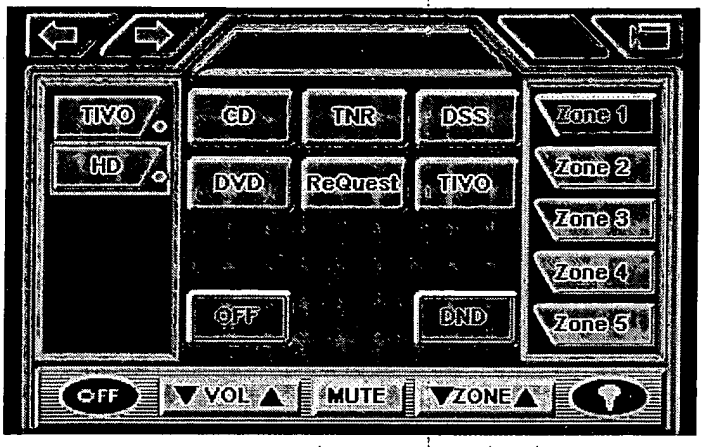
- SC4 Checkbox See PG 36.
- Selecting a System Type See PG 33.



If you want control of a system that has 16 zones and 6 sources, add a **HD Multi Zone** source button.

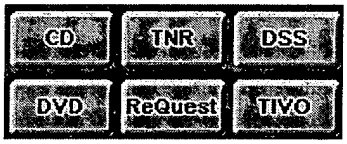
Layout

- Add a Multi Zone HD Source Select source button. See PG 56.



Zone 1 Function button represents what zone will be controlled. To control a different zone press **Zone 2**, **Zone 3** etc...

These Zone names are derived from the **System Screen's ZONES in this Project** text box.



These are the **sources** that will be selected for the Zone.

The Source names are derived from the **Layout Screen**.

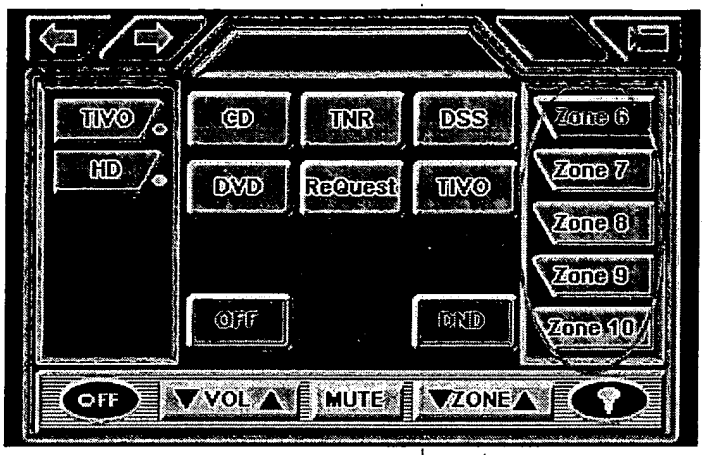
Do Not Disturb only affects the zone you have selected.

Turns the selected zone **OFF**.

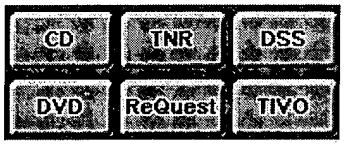
Controls the **volume** and **mute** of the selected zone.

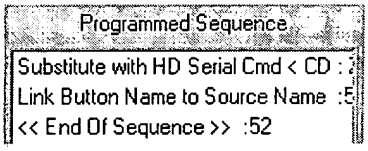
Navigates to the other zones in the system.

Application 7

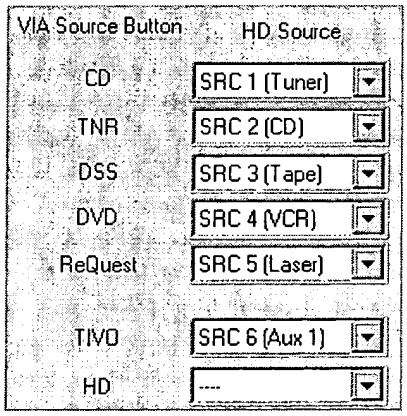


Source buttons are programmed with **Substitute with HD serial command** and **Link Button name to Source Name**.



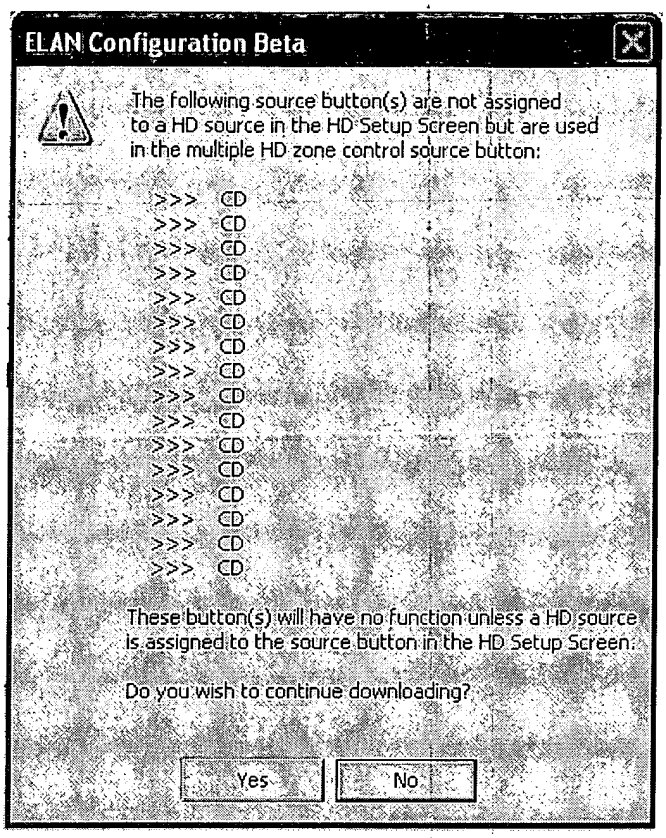


Upon download, the **Substitute with HD serial command** checks the **SetUp Screen** to see what source commands should be assigned.



Since **CD** is **SRC 1 (Tuner)**, VIA!TOOLS will assign Zone/Source1 to the button upon downloading.

If the SetUp Screen is not programmed upon downloading, VIA!TOOLS will ask you if you want to stop downloading to program it.



The above message is telling you the **CD** source button on the **SetUp Screen** does not have a **source input** assigned to it. At this point, select **NO**, program the **SetUp Screen** and then **download**.

Link Button name to Source Name allows VIA!TOOLS to automatically update the source names. If you change a source button name on the Layout Screen, VIA!TOOLS will update the source names on the **HD Multi Zone** source button.

After downloading, all buttons control other zones.